

=> e schneerson rachel/au

E1 1 SCHNEERSON R */AU
E2 3 SCHNEERSON R S/AU
E3 208 --> SCHNEERSON RACHEL/AU
E4 1 SCHNEERSON S/AU
E5 1 SCHNEERSON SARAH/AU
E6 8 SCHNEERSONPORAT S/AU
E7 1 SCHNEESANS M/AU
E8 2 SCHNEEVEIS P/AU
E9 1 SCHNEEVOGT E/AU
E10 1 SCHNEEVOIGHT ALWIN/AU
E11 2 SCHNEEVOIGHT A/AU
E12 18 SCHNEEVOIGHT ALWIN/AU

=> s e1-e3 and anthra?

L1 18 ("SCHNEERSON R */AU OR "SCHNEERSON R S"/AU OR "SCHNEERSON RACHEL"/AU) AND ANTHRA?

=> dup rem l1

PROCESSING COMPLETED FOR L1

L2 10 DUP REM L1 (8 DUPLICATES REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 10 ANSWERS - CONTINUE? Y/(N):y

L2 ANSWER 1 OF 10 USPATFULL on STN

AN 2006:158613 USPATFULL

TI Poly-gamma-glutamic conjugates for eliciting immune responses directed against bacilli

IN Schneerson, Rachel, Bethesda, MD, UNITED STATES
Leppla, Stephen, Bethesda, MD, UNITED STATES
Robbins, John B., Chevy Chase, MD, UNITED STATES
Shiloach, Joseph, Rockville, MD, UNITED STATES
Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
Liu, Darrell, Bethesda, MD, UNITED STATES
Majadly, Fathy, Frederick, MD, UNITED STATES

PI US 2006134143 A1 20060622

AI US 2004-559825 A1 20040604 (10)

WO 2004-US17736 20040604

20051202 PCT 371 date

PRAI US 2003-476598P 20030605 (60)

DT Utility

FS APPLICATION

LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND, OR, 97204-2988, US

CLMN Number of Claims: 36

ECL Exemplary Claim: 1

DRWN 2 Drawing Page(s)

LN.CNT 2866

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Immunogenic compositions and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly- γ -glutamic acid (γ PGA) polypeptide of B. anthracis, or of another Bacillus that expresses a γ PGA polypeptide. The γ PGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered.

L2 ANSWER 2 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 1

AN 2006:436213 BIOSIS

DN PREV200600430224

TI Additional conjugation methods and immunogenicity of Bacillus anthracis poly-gamma-D-glutarnic acid-protein conjugates.

AU Kubler-Kielb, Joanna [Reprint Author]; Liu, Teh-Yung; Mocca, Christopher; Majadly, Fathy; Robbins, John B.; Schneerson, Rachel

CS NICHD, NIH, LDMI, 9000 Rockville Pike, Bldg 6, Rm 1A05, Bethesda, MD 20892 USA
kielbj@mail.nih.gov

SO Infection and Immunity, (AUG 2006) Vol. 74, No. 8, pp. 4744-4749.
CODEN: INFIBR. ISSN: 0019-9567.

DT Article

LA English

ED Entered STN: 30 Aug 2006
Last Updated on STN: 30 Aug 2006

AB The capsule of Bacillus anthracis, composed of poly-gamma-D-glutamic acid (gamma DPGA), is an essential virulence factor of B. anthracis. The capsule inhibits innate host defense through its antiphagocytic action. gamma DPGA is a poor immunogen, but when covalently bound to a carrier protein, it elicits serum antibodies. To identify the optimal construct for clinical use, synthetic gamma DPGAs of different lengths were bound to carrier proteins at different densities. The advantages of the synthetic over the natural polypeptide are the homogeneous chain length and end groups, allowing conjugates to be accurately characterized and standardized and their chemical compositions to be related to their immunogenicities. In the present study, we evaluated, in addition to methods reported by us, hydrazone, oxime, and thioether linkages between gamma DPGA and several proteins, including bovine serum albumin, recombinant Pseudomonas aeruginosa exotoxin A, recombinant B. anthracis protective antigen (rPA), and tetanus toxoid (TT). The effects of the dosage and formulation on the immunogenicities of the conjugates were evaluated in mice. All conjugates were immunogenic. The optimal gamma DPGA chain length of 10 to 15 amino acids and the density, an average of 15 mol gamma DPGA per mol of protein, were confirmed. The thioether bond was the optimal linkage type, and TT and rPA were the best carriers. The optimal dosage was 1.2 to 2.5 μ g of gamma DPGA per mouse, and adsorption of the conjugates onto aluminum hydroxide significantly increased the antibody response to the protein with a lesser effect on anti-gamma DPGA levels.

L2 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

AN 2005:1294042 CAPLUS

DN 144:35295

TI Hydrazone conjugates of haptens and antigens

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph

PA United States Dept. of Health and Human Services, USA

SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,			

SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

WO 2005117965 A1 20051215 WO 2005-US19678 20050603
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
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EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

PRAI WO 2004-US17736 A2 20040604
US 2003-476598P P 20030605
US 2004-5851 A 20041206

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L2 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1314018 CAPLUS

DN 144:35300

TI Methods for preparing immunogenic conjugates for use in vaccines

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy;

Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph

PA The Government of the United States of America as Represented by the

Secretary, Department of Healthand Human Services, USA

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,				

NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,
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 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

US 2005271675 A1 20051208 US 2004-5851 20041206
 PRAI WO 2004-US17736 A 20040604
 US 2004-5851 A 20041206
 US 2003-476598P P 20030605

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly-γ-glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:14426 CAPLUS

DN 142:112426

TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection

IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W:				
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	RW:				
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	AU 2004252091	A1	20050106	AU 2004-252091	20040604
	CA 2528067	AA	20050106	CA 2004-2528067	20040604
	EP 1633778	A1	20060315	EP 2004-754360	20040604
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	US 2005271675	A1	20051208	US 2004-5851	20041206

WO 2005117965 A1 20051215 WO 2005-US19678 20050603
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2006134143 A1 20060622 US 2005-559825 20051202
PRAI US 2003-476598P P 20030605
WO 2004-US17736 W 20040604
US 2004-5851 A 20041206

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly- γ -glutamic acid (γ PGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γ PGA polypeptide. The γ PGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ -D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HbAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ -D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
AN 2004:331575 CAPLUS
DN 140:338027
TI Methods for preparing Bacillus anthracis protective antigen for use in vaccines
IN Shiloach, Joseph; Leppla, Stephen H.; Ramirez, Delia M.; Schneerson, Rachel; Robbins, John B.
PA USA
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004076638	A1	20040422	US 2002-290712	20021108
PRAI	US 2001-344505P	P	20011109		

AB The authors disclose improved methods of producing and recovering B. anthracis protective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response.

L2 ANSWER 7 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2005:488548 BIOSIS
DN PREV200510291216
TI Future vaccine development at NICHD.
AU Robbins, John B. [Reprint Author]; Schneerson, Rachel
CS NICHD, Lab Dev and Mol Immun, Sect Bacterial Dis Pathogenesis and Immun, NIH, Bldg 6, Room 436, Bethesda, MD 20892 USA

robbinsj@nichd.nih.gov; schneerr@mail.nih.gov

SO Kaler, SG [Editor]; Rennert, OM [Editor]. (2004) pp. 49-59. Annals of the New York Academy of Sciences.
 Publisher: NEW YORK ACAD SCIENCES, 2 EAST 63RD ST, NEW YORK, NY 10021 USA.
 Series: ANNALS OF THE NEW YORK ACADEMY OF SCIENCES.
 Meeting Info.: 40th Scientific Symposium of the National-Institute-of-Child-Health-and-Human-Development. Bethesda, MD, USA. 20030908,. NICHD.
 ISSN: 0077-8923 (print). ISBN: 1-57331-520-6(H).

DT Book; (Book Chapter)
 Conference; (Meeting)
 General Review; (Literature Review)

LA English

ED Entered STN: 16 Nov 2005
 Last Updated on STN: 16 Nov 2005

AB Using published data and the results of our studies, we hypothesized that a critical level of serum IgG antibodies to the surface structures of invasive pathogens (capsular polysaccharides of Haemophilus influenzae type b, pneumococcus, meningococcus, Salmonella typhi, Escherichia coli, and Staphylococcus aureus, the O-specific polysaccharide LPS domain of the LPS of Shigella, non-typhoidal Salmonella, and E. coli, and the capsular polypeptide of Bacillus anthracis) confer immunity to these pathogens. Covalent attachment to a protein increases their immunogenicity and bestows T-cell properties to these antigens. We have also shown that a critical level of serum IgG antibodies to pertussis toxin alone induces immunity on both an individual and on a community basis (herd immunity) to Bordetella pertussis. It is likely that all the above conjugates and pertussis toxoid will be incorporated into vaccines for routine infant immunization.

L2 ANSWER 8 OF 10 MEDLINE on STN

AN 2005202078 MEDLINE

DN PubMed ID: 15838097

TI Future vaccine development at NICHD.

AU Robbins John B; Schneerson Rachel

CS Laboratory of Developmental and Molecular Immunity, NICHD, NIH, Building 6, Room 436, Bethesda, MD 20892, USA.. robbinsj@nichd.nih.gov

SO Annals of the New York Academy of Sciences, (2004 Dec) Vol. 1038, pp. 49-59.
 Journal code: 7506858. ISSN: 0077-8923.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 200511

ED Entered STN: 20 Apr 2005
 Last Updated on STN: 10 Nov 2005
 Entered Medline: 9 Nov 2005

AB Using published data and the results of our studies, we hypothesized that a critical level of serum IgG antibodies to the surface structures of invasive pathogens (capsular polysaccharides of Haemophilus influenzae type b, pneumococcus, meningococcus, Salmonella typhi, Escherichia coli, and Staphylococcus aureus, the O-specific polysaccharide LPS domain of the LPS of Shigella, non-typhoidal Salmonella, and E. coli, and the capsular polypeptide of Bacillus anthracis) confer immunity to these pathogens. Covalent attachment to a protein increases their immunogenicity and bestows T-cell properties to these antigens. We have also shown that a critical level of serum IgG antibodies to pertussis toxin alone induces immunity on both an individual and on a community basis (herd immunity) to Bordetella pertussis. It is likely that all the above conjugates and pertussis toxoid will be incorporated into vaccines for routine infant immunization.

L2 ANSWER 9 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 DUPLICATE 4

AN 2003:478120 BIOSIS
 DN PREV200300478120
 TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of *Bacillus anthracis*: A potential addition to the anthrax vaccine.
 AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
 CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
 schneerr@mail.nih.gov
 SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
 ISSN: 0027-8424 (ISSN print).
 DT Article
 LA English
 ED Entered STN: 15 Oct 2003
 Last Updated on STN: 15 Oct 2003
 AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule (gammaDPGA) are essential for the virulence of *Bacillus anthracis*. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or corresponding synthetic peptides were bound to BSA, recombinant *B. anthracis* PA (rPA), or recombinant *Pseudomonas aeruginosa* exotoxin A (rEPA). To identify the optimal construct, conjugates of *B. anthracis* gammaDPGA, *Bacillus pumilus* gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and anti-protein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of *B. anthracis* tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

L2 ANSWER 10 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 DUPLICATE 5

AN 2002:429815 BIOSIS
 DN PREV200200429815
 TI Development of an improved vaccine for anthrax.
 AU Leppla, Stephen H. [Reprint author]; Robbins, John B.; Schneerson, Rachel; Shiloach, Joseph
 CS Oral Infection and Immunity Branch, NIDCR, 30 Convent Drive, Building 30, Room 303, Bethesda, MD, 20892-4350, USA
 Leppla@nih.gov
 SO Journal of Clinical Investigation, (July, 2002) Vol. 110, No. 2, pp. 141-144. print.
 CODEN: JCINAO. ISSN: 0021-9738.
 DT Article
 LA English
 ED Entered STN: 14 Aug 2002
 Last Updated on STN: 14 Aug 2002

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=> e leppla stephen/au
E1      1      LEPPLA S M/AU
E2      6      LEPPLA STEPHAN H/AU
E3     25 --> LEPPLA STEPHEN/AU
E4      2      LEPPLA STEPHEN A/AU
E5     329     LEPPLA STEPHEN H/AU
E6      1      LEPPLA STEVE H/AU
E7     36     LEPPLA W/AU
E8      9      LEPPLA WOLFRAM/AU
E9      3      LEPPLA WOLLSIFFER G/AU
E10     1      LEPPLAWOLLSIFFER G/AU
E11     3      LEPPLA A P/AU
E12     1      LEPPLA ALBRECHT P/AU

=> s e1-e6 and anthra?
L3      309 ("LEPPLA S M"/AU OR "LEPPLA STEPHAN H"/AU OR "LEPPLA STEPHEN"/AU
          OR "LEPPLA STEPHEN A"/AU OR "LEPPLA STEPHEN H"/AU OR "LEPPLA
          STEVE H"/AU) AND ANTHRA?

=> s l3 and glutamic
L4      18 L3 AND GLUTAMIC

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5      15 DUP REM L4 (3 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):y

L5      ANSWER 1 OF 15  USPATFULL on STN
AN      2006:158613  USPATFULL
TI      Poly-gamma-glutamic conjugates for eliciting immune responses
          directed against bacilli
IN      Schneerson, Rachel, Bethesda, MD, UNITED STATES
          Leppla, Stephen, Bethesda, MD, UNITED STATES
          Robbins, John B., Chevy Chase, MD, UNITED STATES
          Shiloach, Joseph, Rockville, MD, UNITED STATES
          Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
          Liu, Darrell, Bethesda, MD, UNITED STATES
          Majadly, Fathy, Frederick, MD, UNITED STATES
PI      US 2006134143      A1      20060622
AI      US 2004-559825      A1      20040604 (10)
          WO 2004-US17736      20040604
          20051202  PCT 371 date
PRAI    US 2003-476598P      20030605 (60)
DT      Utility
FS      APPLICATION
LREP    KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
          OR, 97204-2988, US
CLMN    Number of Claims: 36
ECL     Exemplary Claim: 1
DRWN    2 Drawing Page(s)
LN.CNT  2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Immunogenic compositions and methods for eliciting an immune response
          against B. anthracis and other bacilli are provided that
          include immunogenic conjugates of a poly- $\gamma$ - glutamic acid
          ( $\gamma$ PGA) polypeptide of B. anthracis, or of another
          Bacillus that expresses a  $\gamma$ PGA polypeptide. The  $\gamma$ PGA
          conjugates elicit an effective immune response against B.
          anthracis, or against another Bacillus, in mammalian hosts to
          which the conjugates are administered.

```

L5 ANSWER 2 OF 15 USPATFULL on STN
AN 2006:41161 USPATFULL
TI Methods and formulations comprising agonists and antagonists of nuclear hormone receptors
IN Sternberg, Esther M., 3610 UPTON AVENUE N.W., WASHINGTON, DC, UNITED STATES 20008
Webster, Jeannette I., Washington, DC, UNITED STATES
Tonelli, Leonardo H., Bethesda, MD, UNITED STATES
Leppla, Stephen H., Bethesda, MD, UNITED STATES
Moayeri, Mahtab, Bethesda, MD, UNITED STATES
PI US 2006035813 A1 20060216
AI US 2003-530254 A1 20031003 (10)
WO 2003-US31406 20031003
20050404 PCT 371 date
PRAI US 2002-416222P 20021004 (60)
US 2003-419454P 20021018 (60)
DT Utility
FS APPLICATION
LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, ONE WORLD TRADE CENTER, PORTLAND, OR, 97204-2988, US
CLMN Number of Claims: 51
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 4767

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel compounds, pharmaceutical compositions, and methods are provided for modulating processes mediated by nuclear hormone receptors. A partial or complete agonist or antagonist modulates, directly or indirectly, an activity of one or more nuclear hormone receptors for glucocorticoids (GRs), androgens (ARs), mineralocorticoids (MRs), progestins (PRs), estrogens (ERs), thyroid hormones (TRs), vitamin D (VDRs), retinoids (RARs and RXRs), peroxisomes (XPARs and PPARs), icosanoids (IRs), or one or more orphan receptors, such as steroid and thyroid receptors. Exemplary compounds of the disclosure are bacterial products, for example bacterial toxins, and these compounds are useful in screens for other antagonists and agonists. Related methods and compositions are provided for diagnosis, treatment and prevention of bacterial disease and associated or unrelated inflammatory, autoimmune, toxic (including shock), and chronic and/or lethal sequelae associated with bacterial infection.

L5 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
AN 2005:1294042 CAPLUS
DN 144:35295
TI Hydrazone conjugates of haptens and antigens
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph
PA United States Dept. of Health and Human Services, USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

WO 2005117965 A1 20051215 WO 2005-US19678 20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

PRAI WO 2004-US17736 A2 20040604

US 2003-476598P P 20030605

US 2004-5851 A 20041206

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L5 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1314018 CAPLUS

DN 144:35300

TI Methods for preparing immunogenic conjugates for use in vaccines

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph

PA The Government of the United States of America as Represented by the Secretary, Department of Healthand Human Services, USA

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,			

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2005271675 A1 20051208 US 2004-5851 20041206
 PRAI WO 2004-US17736 A 20040604
 US 2004-5851 A 20041206
 US 2003-476598P P 20030605

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly- γ - glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:14426 CAPLUS

DN 142:112426

TI Bacillus capsular poly- γ - glutamic acid conjugates for eliciting immune responses against Bacillus infection

IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2004252091	A1	20050106	AU 2004-252091	20040604
	CA 2528067	AA	20050106	CA 2004-2528067	20040604
	EP 1633778	A1	20060315	EP 2004-754360	20040604

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2005271675 A1 20051208 US 2004-5851 20041206
 WO 2005117965 A1 20051215 WO 2005-US19678 20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
 NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
 SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
 ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

US 2006134143 A1 20060622 US 2005-559825 20051202
 PRAI US 2003-476598P P 20030605
 WO 2004-US17736 W 20040604
 US 2004-5851 A 20041206

AB Immunogenic compns. and methods for eliciting an immune response against
 B. anthracis and other bacilli are provided that include
 immunogenic conjugates of a poly- γ - glutamic acid
 (γ PGA) polypeptides of B. anthracis, or of another
 Bacillus that expresses a γ PGA polypeptide. The γ PGA
 conjugates elicit an effective immune response against B.
 anthracis, or against another Bacillus, in mammalian hosts to
 which the conjugates are administered. The conjugate consists of
 γ -D-PGA and carrier selected from bovine serum albumin, recombinant
 Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin
 A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium
 perfringens toxoid, HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe
 crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog
 or mimetic, or combination of two or more. The preferred conjugate
 consists of γ -D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 15 USPATFULL on STN
 AN 2005:292537 USPATFULL
 TI Multimeric protein toxins to target cells having multiple identifying
 characteristics
 IN Leppla, Stephen H., Bethesda, MD, UNITED STATES
 Liu, Shi-Hui, Gaithersburg, MD, UNITED STATES
 Bugge, Thomas H., Bethesda, MD, UNITED STATES
 PA The Government of the United States, as represented by the secretary of
 health and Human (U.S. corporation)
 Services, National Institutes of Health, Office of Technology Transfer,
 Rockville, MD, UNITED STATES (U.S. corporation)
 PI US 2005255083 A1 20051117
 AI US 2005-55557 A1 20050209 (11)
 PRAI US 2004-543417P 20040209 (60)
 DT Utility
 FS APPLICATION
 LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, 8TH FLOOR,
 SAN FRANCISCO, CA, 94111, US
 CLMN Number of Claims: 46
 ECL Exemplary Claim: 1
 DRWN 8 Drawing Page(s)
 LN.CNT 4299
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB The present invention provides compositions comprising modified
 bacterial toxins and methods for using the modified bacterial toxins for
 targeting particular cell populations and for treating diseases.

L5 ANSWER 7 OF 15 USPATFULL on STN
 AN 2005:226972 USPATFULL
 TI Anthrax lethal factor is a mapk kinase protease
 IN Duesbery, Nicholas, Grand Rapids, MI, UNITED STATES
 Webb, Craig, Rockford, MI, UNITED STATES
 Leppla, Stephen, Bethesda, MD, UNITED STATES
 Vande Woude, George, Ada, MI, UNITED STATES
 PA The Gov. of the USA as represented by the Secretary of the Dept of
 Health and Human Services, Rockville, MD, UNITED STATES (U.S.
 corporation)
 PI US 2005196822 A1 20050908
 US 7056693 B2 20060606
 AI US 2005-112137 A1 20050422 (11)
 RLI Division of Ser. No. US 2002-93200, filed on 5 Mar 2002, GRANTED, Pat.
 No. US 6911203 Division of Ser. No. US 2000-623104, filed on 13 Dec
 2000, GRANTED, Pat. No. US 6485925 A 371 of International Ser. No. WO
 1999-US7129, filed on 31 Mar 1999
 PRAI US 1998-80330P 19980401 (60)
 DT Utility
 FS APPLICATION
 LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, 8TH FLOOR,
 SAN FRANCISCO, CA, 94111, US
 CLMN Number of Claims: 8
 ECL Exemplary Claim: 1-24
 DRWN 1 Drawing Page(s)
 LN.CNT 2431

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to in vitro and ex vivo methods of
 screening for modulators, homologues, and mimetics of lethal factor
 mitogen activated protein kinase kinase (MAPKK) protease activity, as
 well as methods of treating cancer by administering LF to transformed
 cells.

L5 ANSWER 8 OF 15 USPATFULL on STN
 AN 2005:143741 USPATFULL
 TI Imaging the activity of extracellular protease in cells using mutant
 anthrax toxin protective antigens that are cleaved by specific
 extracellular proteases
 IN Bugge, Thomas H., Bethesda, MD, UNITED STATES
 Leppla, Stephen H., Bethesda, MD, UNITED STATES
 Liu, Shi-Hui, Rockville, MD, UNITED STATES
 Mitola, David, Baltimore, MD, UNITED STATES
 PA The Government of the United States as represented by the Secretary of
 the Department of Health and, Rockville, MD, UNITED STATES, 20852-3804
 (U.S. corporation)
 PI US 2005123476 A1 20050609
 AI US 2003-488806 A1 20020905 (10)
 WO 2002-US28397 20020905
 PRAI US 2001-317550P 20010905 (60)
 DT Utility
 FS APPLICATION
 LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, 8TH FLOOR,
 SAN FRANCISCO, CA, 94111, US
 CLMN Number of Claims: 28
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 4268

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention pertains to methods for imaging the activity of
 extracellular proteases in cells using the anthrax binary
 toxin-system to target cells expressing extracellular proteases with
 mutant anthrax toxin protective antigens (μ PrAg) that bind
 to receptors on the cells and are cleaved by a specific extracellular

protease expressed by the cells, and ligands that specifically bind to the cleaved μ PrAg and are linked to a moiety that is detectable by an imaging procedure. The μ PrAg proteins used in the methods comprise a protease cleavage site that is cleaved by a specific extracellular protease and is in place of the furin cleavage site of the native PrAg. The methods are useful for diagnosing and treating diseases and undesirable physiological conditions correlated with the activity of extracellular proteases, and for optimizing the therapeutic efficacy of drugs used to treat such diseases and conditions.

L5 ANSWER 9 OF 15 USPATFULL on STN

AN 2004:221352 USPATFULL

TI Methods for preparing Bacillus anthracis sporulation deficient mutants and for producing recombinant Bacillus anthracis protective antigen for use in vaccines

IN Leppla, Stephen H., Bethesda, MD, UNITED STATES
Rosovitz, Mary Jo, Kensington, MD, UNITED STATES
Hsu, S. Dana, Bethesda, MD, UNITED STATES

PI US 2004171121 A1 20040902

AI US 2003-638006 A1 20030808 (10)

PRAI US 2002-402285P 20020809 (60)

DT Utility

FS APPLICATION

LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, ONE WORLD TRADE CENTER, PORTLAND, OR, 97204-2988

CLMN Number of Claims: 67

ECL Exemplary Claim: 1

DRWN 9 Drawing Page(s)

LN.CNT 1786

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to improved methods of producing and recovering sporulation-deficient B. anthracis mutant stains, and for producing and recovering recombinant B. anthracis protective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response in humans, including responses which provide protection against, or reduce the severity of, B. anthracis bacterial infections and which are useful to prevent and/or treat illnesses caused by B. anthracis, such as inhalation anthrax, cutaneous anthrax and gastrointestinal anthrax.

L5 ANSWER 10 OF 15 USPATFULL on STN

AN 2004:100777 USPATFULL

TI Methods for preparing bacillus anthracis protective antigen for use in vaccines

IN Shiloach, Joseph, Rockville, MD, UNITED STATES
Leppla, Stephen H., Bethesda, MD, UNITED STATES
Ramirez, Delia M., Bethesda, MD, UNITED STATES
Schneerson, Rachel, Bethesda, MD, UNITED STATES
Robbins, John B., Chevy Chase, MD, UNITED STATES

PI US 2004076638 A1 20040422

AI US 2002-290712 A1 20021108 (10)

PRAI US 2001-344505P 20011109 (60)

DT Utility

FS APPLICATION

LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, ONE WORLD TRADE CENTER, PORTLAND, OR, 97204-2988

CLMN Number of Claims: 35

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1273

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to improved methods of producing and recovering B.

anthracisprotective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response in humans, including responses which provide protection against, or reduce the severity of, B. anthracis bacterial infections and which are useful to prevent and/or treat illnesses caused by B. anthracis, such as inhalation anthrax, cutaneous anthrax and gastrointestinal anthrax.

L5 ANSWER 11 OF 15 USPATFULL on STN
AN 2003:140492 USPATFULL
TI Anthrax lethal factor is a MAPK kinase protease
IN Duesbery, Nicholas, Grand Rapids, MI, UNITED STATES
Webb, Craig, Rockford, MI, UNITED STATES
Leppla, Stephen, Bethesda, MD, UNITED STATES
Vande Woude, George, Ada, MI, UNITED STATES
PI US 2003096333 A1 20030522
US 6893835 B2 20050517
AI US 2002-93248 A1 20020305 (10)
RLI Division of Ser. No. US 2000-623104, filed on 13 Dec 2000, GRANTED, Pat.
No. US 6485925
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 61
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 2521

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to in vitro and ex vivo methods of screening for modulators, homologues, and mimetics of lethal factor mitogen activated protein kinase kinase (MAPKK) protease activity, as well as methods of treating cancer by administering LF to transformed cells.

L5 ANSWER 12 OF 15 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
STN
AN 2003:478120 BIOSIS
DN PREV200300478120
TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG
antibodies in mice to the capsule of Bacillus anthracis: A
potential addition to the anthrax vaccine.
AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung;
Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund,
Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
CS National Institute of Child Health and Human Development, National
Institutes of Health, Bethesda, MD, 20892, USA
schneerr@mail.nih.gov
SO Proceedings of the National Academy of Sciences of the United States of
America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
ISSN: 0027-8424 (ISSN print).
DT Article
LA English
ED Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003
AB Both the protective antigen (PA) and the poly(gamma-D-glutamic
acid) capsule(gammaDPGA) are essential for the virulence of Bacillus
anthracis. A critical level of vaccine-induced IgG anti-PA
confers immunity to anthrax, but there is no information about
the protective action of IgG anti-gammaDPGA. Because the number of spores
presented by bioterrorists might be greater than encountered in nature, we
sought to induce capsular antibodies to expand the immunity conferred by
available anthrax vaccines. The nonimmunogenic gammaDPGA or

corresponding synthetic peptides were bound to BSA, recombinant B. anthracis PA (rPA), or recombinant Pseudomonas aeruginosa exotoxin A (rEPA). To identify the optimal construct, conjugates of B. anthracis gammaDPGA, Bacillus pumilus gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of B. anthracis tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

L5 ANSWER 13 OF 15 USPATFULL on STN
AN 2002:329841 USPATFULL
TI Anthrax lethal factor is a MAPK kinase protease
IN Duesbery, Nicholas, Grand Rapids, MI, UNITED STATES
Webb, Craig, Rockford, MI, UNITED STATES
Leppla, Stephen, Bethesda, MD, UNITED STATES
Vande Woude, George, Ada, MI, UNITED STATES
PI US 2002187521 A1 20021212
US 6911203 B2 20050628
AI US 2002-93200 A1 20020305 (10)
RLI Division of Ser. No. US 2000-623104, filed on 13 Dec 2000, ABANDONED A
371 of International Ser. No. WO 1999-US7126, filed on 31 Mar 1999,
PENDING
PRAI US 1998-80330P 19980401 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 61
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 2519
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to in vitro and ex vivo methods of
screening for modulators, homologues, and mimetics of lethal factor
mitogen activated protein kinase kinase (MAPKK) protease activity, as
well as methods of treating cancer by administering LF to transformed
cells.

L5 ANSWER 14 OF 15 USPATFULL on STN
AN 2002:310778 USPATFULL
TI Anthrax lethal factor is a MAPK kinase protease
IN Duesbery, Nicholas, Grand Rapids, MI, United States
Webb, Craig, Rockford, MI, United States
Leppla, Stephen, Bethesda, MD, United States
Woude, George Vande, Ada, MI, United States
PA The United States of America as represented by the Department of Health
and Human Services, Washington, DC, United States (U.S. government)
PI US 6485925 B1 20021126
WO 9950439 19991007
AI US 2000-623104 20001213 (9)
WO 1999-US7126 19990331
20001213 PCT 371 date
PRAI US 1998-80330P 19980401 (60)

DT Utility
 FS GRANTED
 EXNAM Primary Examiner: Prouty, Rebecca E.; Assistant Examiner: Walicka, M.
 LREP Townsend and Townsend and Crew LLP
 CLMN Number of Claims: 15
 ECL Exemplary Claim: 1
 DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
 LN.CNT 2373
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB The present invention relates to in vitro and ex vivo methods of screening for modulators, homologues, and mimetics of lethal factor mitogen activated protein kinase kinase (MAPKK) protease activity, as well as methods of treating cancer by administering LF to transformed cells.

L5 ANSWER 15 OF 15 USPATFULL on STN
 AN 97:94207 USPATFULL
 TI Anthrax toxin fusion proteins and related methods
 IN Leppla, Stephen H., Bethesda, MD, United States
 Klimpel, Kurt R., Gaithersburg, MD, United States
 Arora, Naveen, Delhi, India
 Singh, Yogendra, Delhi, India
 Nichols, Peter J., Welling Kent, United Kingdom
 PA The Government of the United States as represented by the Secretary of the Department of Health and Human Services, Washington, DC, United States (U.S. government)
 PI US 5677274 19971014
 AI US 1993-82849 19930625 (8)
 RLI Continuation-in-part of Ser. No. US 1993-21601, filed on 12 Feb 1993, now patented, Pat. No. US 5591631
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Jagannathan, Vasu S.; Assistant Examiner: Romeo, David S.
 LREP Townsend and Townsend and Crew
 CLMN Number of Claims: 12
 ECL Exemplary Claim: 1
 DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
 LN.CNT 3382
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB The present invention provides a nucleic acid encoding a fusion protein comprising a nucleotide sequence encoding the anthrax protective antigen (PA) binding domain of the native anthrax lethal factor (LF) protein and a nucleotide sequence encoding an activity inducing domain of a second protein. Also provided is a nucleic acid encoding a fusion protein comprising a nucleotide sequence encoding the translocation domain and LF binding domain of the native anthrax PA protein and a nucleotide sequence encoding a ligand domain which specifically binds a cellular target. Proteins encoded by the nucleic acid of the invention, vectors comprising the nucleic acids and hosts capable of expressing the protein encoded by the nucleic acids are also provided. A composition comprising the PA binding domain of the native LF protein chemically attached to a non-LF activity inducing moiety is further provided. A method for delivering an activity to a cell is provided. The steps of the method include a) administering to the cell a protein comprising the translocation domain and the LF binding domain of the native PA protein and a ligand domain, and b) administering to the cell a product comprising the PA binding domain of the native LF protein and a non-LF activity inducing moiety, whereby the product administered in step b) is internalized into the cell and performs the activity within the cell. The invention also provides proteins including an anthrax protective antigen which has been mutated to replace the trypsin cleavage site with residues recognized specifically by the HIV-1 protease.

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E3     288 --> ROBBINS JOHN B/AU
E4      22      ROBBINS JOHN C/AU
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E9       1      ROBBINS JOHN F W/AU
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E11     3      ROBBINS JOHN J JR/AU
E12     3      ROBBINS JOHN J SR/AU
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=> dup rem l6
PROCESSING COMPLETED FOR L6
L7      10 DUP REM L6 (8 DUPLICATES REMOVED)
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=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 10 ANSWERS - CONTINUE? Y/(N):y
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L7  ANSWER 1 OF 10  USPATFULL on STN
AN  2006:158613  USPATFULL
TI  Poly-gamma-glutamic conjugates for eliciting immune responses directed
    against bacilli
IN  Schneerson, Rachel, Bethesda, MD, UNITED STATES
    Leppla, Stephen, Bethesda, MD, UNITED STATES
    Robbins, John B., Chevy Chase, MD, UNITED STATES
    Shiloach, Joseph, Rockville, MD, UNITED STATES
    Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
    Liu, Darrell, Bethesda, MD, UNITED STATES
    Majadly, Fathy, Frederick, MD, UNITED STATES
PI  US 2006134143      A1  20060622
AI  US 2004-559825      A1  20040604 (10)
    WO 2004-US17736      20040604
                                20051202  PCT 371 date
PRAI US 2003-476598P      20030605 (60)
DT  Utility
FS  APPLICATION
LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
    OR, 97204-2988, US
CLMN Number of Claims: 36
ECL  Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB  Immunogenic compositions and methods for eliciting an immune response
    against B. anthracis and other bacilli are provided that
    include immunogenic conjugates of a poly-γ-glutamic acid
    (γPGA) polypeptide of B. anthracis, or of another
    Bacillus that expresses a γPGA polypeptide. The γPGA
    conjugates elicit an effective immune response against B.
    anthracis, or against another Bacillus, in mammalian hosts to
    which the conjugates are administered.

L7  ANSWER 2 OF 10  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
    DUPLICATE 1
AN  2006:436213  BIOSIS
DN  PREV200600430224
```

TI Additional conjugation methods and immunogenicity of *Bacillus anthracis* poly-gamma-D-glutarnic acid-protein conjugates.
 AU Kubler-Kielb, Joanna [Reprint Author]; Liu, Teh-Yung; Mocca, Christopher; Majadly, Fathy; Robbins, John B.; Schneerson, Rachel
 CS NICHD, NIH, LDMI, 9000 Rockville Pike, Bldg 6, Rm 1A05, Bethesda, MD 20892 USA
 kielbj@mail.nih.gov
 SO Infection and Immunity, (AUG 2006) Vol. 74, No. 8, pp. 4744-4749.
 CODEN: INFIBR. ISSN: 0019-9567.
 DT Article
 LA English
 ED Entered STN: 30 Aug 2006
 Last Updated on STN: 30 Aug 2006
 AB The capsule of *Bacillus anthracis*, composed of poly-gamma-D-glutamic acid (gamma DPGA), is an essential virulence factor of *B. anthracis*. The capsule inhibits innate host defense through its antiphagocytic action. gamma DPGA is a poor immunogen, but when covalently bound to a carrier protein, it elicits serum antibodies. To identify the optimal construct for clinical use, synthetic gamma DPGAs of different lengths were bound to carrier proteins at different densities. The advantages of the synthetic over the natural polypeptide are the homogeneous chain length and end groups, allowing conjugates to be accurately characterized and standardized and their chemical compositions to be related to their immunogenicities. In the present study, we evaluated, in addition to methods reported by us, hydrazone, oxime, and thioether linkages between gamma DPGA and several proteins, including bovine serum albumin, recombinant *Pseudomonas aeruginosa* exotoxin A, recombinant *B. anthracis* protective antigen (rPA), and tetanus toxoid (TT). The effects of the dosage and formulation on the immunogenicities of the conjugates were evaluated in mice. All conjugates were immunogenic. The optimal gamma DPGA chain length of 10 to 15 amino acids and the density, an average of 15 mol gamma DPGA per mol of protein, were confirmed. The thioether bond was the optimal linkage type, and TT and rPA were the best carriers. The optimal dosage was 1.2 to 2.5 μ g of gamma DPGA per mouse, and adsorption of the conjugates onto aluminum hydroxide significantly increased the antibody response to the protein with a lesser effect on anti-gamma DPGA levels.

L7 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
 AN 2005:1294042 CAPLUS
 DN 144:35295
 TI Hydrazone conjugates of haptens and antigens
 IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph
 PA United States Dept. of Health and Human Services, USA
 SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,				

SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

WO 2005117965 A1 20051215 WO 2005-US19678 20050603
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
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RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

PRAI WO 2004-US17736 A2 20040604
US 2003-476598P P 20030605
US 2004-5851 A 20041206

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L7 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1314018 CAPLUS

DN 144:35300

TI Methods for preparing immunogenic conjugates for use in vaccines

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph

PA The Government of the United States of America as Represented by the Secretary, Department of Health and Human Services, USA

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005117965	A1	20051215	WO 2005-US19678	20050603
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
WO 2005000884	A1	20050106	WO 2004-US17736	20040604
WO 2005000884	C1	20051006		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,			

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 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

US 2005271675 A1 20051208 US 2004-5851 20041206
 PRAI WO 2004-US17736 A 20040604
 US 2004-5851 A 20041206
 US 2003-476598P P 20030605

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly- γ -glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:14426 CAPLUS

DN 142:112426

TI Bacillus capsular poly- γ -glutamic acid conjugates for eliciting immune responses against Bacillus infection

IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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	AU 2004252091	A1	20050106	AU 2004-252091	20040604
	CA 2528067	AA	20050106	CA 2004-2528067	20040604
	EP 1633778	A1	20060315	EP 2004-754360	20040604
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	US 2005271675	A1	20051208	US 2004-5851	20041206

WO 2005117965 A1 20051215 WO 2005-US19678 20050603
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2006134143 A1 20060622 US 2005-559825 20051202
PRAI US 2003-476598P P 20030605
WO 2004-US17736 W 20040604
US 2004-5851 A 20041206

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly- γ -glutamic acid (γ PGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γ PGA polypeptide. The γ PGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ -D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HbAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ -D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
AN 2004:331575 CAPLUS
DN 140:338027
TI Methods for preparing Bacillus anthracis protective antigen for use in vaccines
IN Shiloach, Joseph; Leppla, Stephen H.; Ramirez, Delia M.; Schneerson, Rachel; Robbins, John B.
PA USA
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004076638	A1	20040422	US 2002-290712	20021108
PRAI	US 2001-344505P	P	20011109		

AB The authors disclose improved methods of producing and recovering B. anthracis protective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response.

L7 ANSWER 7 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2005:488548 BIOSIS
DN PREV200510291216
TI Future vaccine development at NICHD.
AU Robbins, John B. [Reprint Author]; Schneerson, Rachel
CS NICHD, Lab Dev and Mol Immun, Sect Bacterial Dis Pathogenesis and Immun, NIH, Bldg 6, Room 436, Bethesda, MD 20892 USA

robbinsj@nichd.nih.gov; schneerr@mail.nih.gov

SO Kaler, SG [Editor]; Rennert, OM [Editor]. (2004) pp. 49-59. Annals of the New York Academy of Sciences.
 Publisher: NEW YORK ACAD SCIENCES, 2 EAST 63RD ST, NEW YORK, NY 10021 USA.
 Series: ANNALS OF THE NEW YORK ACADEMY OF SCIENCES.
 Meeting Info.: 40th Scientific Symposium of the National-Institute-of-Child-Health-and-Human-Development. Bethesda, MD, USA. 20030908,. NICHD.
 ISSN: 0077-8923 (print). ISBN: 1-57331-520-6(H).

DT Book; (Book Chapter)
 Conference; (Meeting)
 General Review; (Literature Review)

LA English

ED Entered STN: 16 Nov 2005
 Last Updated on STN: 16 Nov 2005

AB Using published data and the results of our studies, we hypothesized that a critical level of serum IgG antibodies to the surface structures of invasive pathogens (capsular polysaccharides of Haemophilus influenzae type b, pneumococcus, meningococcus, Salmonella typhi, Escherichia coli, and Staphylococcus aureus, the O-specific polysaccharide LPS domain of the LPS of Shigella, non-typhoidal Salmonella, and E. coli, and the capsular polypeptide of Bacillus anthracis) confer immunity to these pathogens. Covalent attachment to a protein increases their immunogenicity and bestows T-cell properties to these antigens. We have also shown that a critical level of serum IgG antibodies to pertussis toxin alone induces immunity on both an individual and on a community basis (herd immunity) to Bordetella pertussis. It is likely that all the above conjugates and pertussis toxoid will be incorporated into vaccines for routine infant immunization.

L7 ANSWER 8 OF 10 MEDLINE on STN

AN 2005202078 MEDLINE

DN PubMed ID: 15838097

TI Future vaccine development at NICHHD.

AU Robbins John B; Schneerson Rachel

CS Laboratory of Developmental and Molecular Immunity, NICHHD, NIH, Building 6, Room 436, Bethesda, MD 20892, USA.. robbinsj@nichd.nih.gov

SO Annals of the New York Academy of Sciences, (2004 Dec) Vol. 1038, pp. 49-59.
 Journal code: 7506858. ISSN: 0077-8923.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 200511

ED Entered STN: 20 Apr 2005
 Last Updated on STN: 10 Nov 2005
 Entered Medline: 9 Nov 2005

AB Using published data and the results of our studies, we hypothesized that a critical level of serum IgG antibodies to the surface structures of invasive pathogens (capsular polysaccharides of Haemophilus influenzae type b, pneumococcus, meningococcus, Salmonella typhi, Escherichia coli, and Staphylococcus aureus, the O-specific polysaccharide LPS domain of the LPS of Shigella, non-typhoidal Salmonella, and E. coli, and the capsular polypeptide of Bacillus anthracis) confer immunity to these pathogens. Covalent attachment to a protein increases their immunogenicity and bestows T-cell properties to these antigens. We have also shown that a critical level of serum IgG antibodies to pertussis toxin alone induces immunity on both an individual and on a community basis (herd immunity) to Bordetella pertussis. It is likely that all the above conjugates and pertussis toxoid will be incorporated into vaccines for routine infant immunization.

L7 ANSWER 9 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 DUPLICATE 4

AN 2003:478120 BIOSIS
 DN PREV200300478120
 TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of *Bacillus anthracis*: A potential addition to the anthrax vaccine.
 AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
 CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
 schneerr@mail.nih.gov
 SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
 ISSN: 0027-8424 (ISSN print).
 DT Article
 LA English
 ED Entered STN: 15 Oct 2003
 Last Updated on STN: 15 Oct 2003
 AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule(gammaDPGA) are essential for the virulence of *Bacillus anthracis*. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or corresponding synthetic peptides were bound to BSA, recombinant *B. anthracis* PA (rPA), or recombinant *Pseudomonas aeruginosa* exotoxin A (rEPA). To identify the optimal construct, conjugates of *B. anthracis* gammaDPGA, *Bacillus pumilus* gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of *B. anthracis* tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

L7 ANSWER 10 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 DUPLICATE 5

AN 2002:429815 BIOSIS
 DN PREV200200429815
 TI Development of an improved vaccine for anthrax.
 AU Leppla, Stephen H. [Reprint author]; Robbins, John B.; Schneerson, Rachel; Shiloach, Joseph
 CS Oral Infection and Immunity Branch, NIDCR, 30 Convent Drive, Building 30, Room 303, Bethesda, MD, 20892-4350, USA
 Leppla@nih.gov
 SO Journal of Clinical Investigation, (July, 2002) Vol. 110, No. 2, pp. 141-144. print.
 CODEN: JCINAO. ISSN: 0021-9738.
 DT Article
 LA English
 ED Entered STN: 14 Aug 2002
 Last Updated on STN: 14 Aug 2002

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=> e shiloach joseph/au
E1      579      SHILOACH J/AU
E2      5        SHILOACH J */AU
E3      230 --> SHILOACH JOSEPH/AU
E4      17       SHILOACH M/AU
E5      3        SHILOACH MIRA/AU
E6      31       SHILOACH Y/AU
E7      1        SHILOACH YOSHI/AU
E8      4        SHILOACH YOSHI/AU
E9      1        SHILOAH A/AU
E10     17       SHILOAH E/AU
E11     2        SHILOAH ELI/AU
E12     1        SHILOAH ELIAHOU/AU

=> s e1-e3 and anthra?
L8      36 ("SHILOACH J"/AU OR "SHILOACH J */AU OR "SHILOACH JOSEPH"/AU)
        AND ANTHRA?

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9      9 DUP REM L8 (27 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 9 ANSWERS - CONTINUE? Y/(N):y

L9      ANSWER 1 OF 9  USPATFULL on STN
AN      2006:158613  USPATFULL
TI      Poly-gamma-glutamic conjugates for eliciting immune responses directed
        against bacilli
IN      Schneerson, Rachel, Bethesda, MD, UNITED STATES
        Leppla, Stephen, Bethesda, MD, UNITED STATES
        Robbins, John B., Chevy Chase, MD, UNITED STATES
        Shiloach, Joseph, Rockville, MD, UNITED STATES
        Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
        Liu, Darrell, Bethesda, MD, UNITED STATES
        Majadly, Fathy, Frederick, MD, UNITED STATES
PI      US 2006134143      A1      20060622
AI      US 2004-559825      A1      20040604 (10)
        WO 2004-US17736      20040604
        20051202  PCT 371 date
PRAI    US 2003-476598P      20030605 (60)
DT      Utility
FS      APPLICATION
LREP    KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
        OR, 97204-2988, US
CLMN    Number of Claims: 36
ECL     Exemplary Claim: 1
DRWN    2 Drawing Page(s)
LN.CNT  2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Immunogenic compositions and methods for eliciting an immune response
        against B. anthracis and other bacilli are provided that
        include immunogenic conjugates of a poly-γ-glutamic acid
        (γPGA) polypeptide of B. anthracis, or of another
        Bacillus that expresses a γPGA polypeptide. The γPGA
        conjugates elicit an effective immune response against B.
        anthracis, or against another Bacillus, in mammalian hosts to
        which the conjugates are administered.

L9      ANSWER 2 OF 9  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
        DUPLICATE 1
AN      2006:459046  BIOSIS
DN      PREV200600459246

```

TI Passive immunotherapy of Bacillus anthracis pulmonary infection
in mice with antisera produced by DNA immunization.

AU Herrmann, John E. [Reprint Author]; Wang, Shixia; Zhang, Chuanyou;
Panchal, Rekha G.; Bavari, Sina; Lyons, C. Rick; Lovchik, Julie A.;
Golding, Basil; Shiloach, Joseph; Lu, Shan

CS Antibody Sci Inc, 80 Webster St, Worcester, MA 01603 USA
ASI@AbScience.com

SO Vaccine, (JUL 26 2006) Vol. 24, No. 31-32, pp. 5872-5880.
CODEN: VACCDE. ISSN: 0264-410X.

DT Article

LA English

ED Entered STN: 13 Sep 2006
Last Updated on STN: 13 Sep 2006

AB Because of the high failure rate of antibiotic treatment in patients with
anthrax there is a need for additional therapies such as passive
immunization with therapeutic antibodies. In this study, we used
codon-optimized plasmid DNAs (DNA vaccines) encoding Bacillus
anthracis protective antigen (PA) to immunize rabbits for
producing anti-anthrax antibodies for use in passive
immunotherapy. The antisera generated with these DNA vaccines were of
high titer as measured by ELISA. The antisera were also able to protect
J774 macrophage cells by neutralizing the cytotoxic effect of exogenously
added anthrax lethal toxin, and of the toxin released by B.
anthracis (Sterne strain) spores following infection. In
addition, the antisera passively protected mice against pulmonary
challenge with an approximate 50 LD50 dose of B. anthracis
(Sterne strain) spores. The protection in mice was obtained when the
antiserum was given 1 h before or 1 h after challenge. We further
demonstrated that IgG and F(ab')₂ components purified from anti-PA
rabbit hyperimmune sera retained similar levels of neutralizing activities
against both exogenously added B. anthracis lethal toxin and
toxin produced by B. anthracis (Sterne strain) spores. The high
titer antisera we produced will enable an immunization strategy to
supplement antibiotic therapy for improving the survival of patients with
anthrax. (c) 2006 Elsevier Ltd. All rights reserved.

L9 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1314018 CAPLUS

DN 144:35300

TI Methods for preparing immunogenic conjugates for use in vaccines

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen
H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph

PA The Government of the United States of America as Represented by the
Secretary, Department of Health and Human Services, USA

SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

WO 2005000884 A1 20050106 WO 2004-US17736 20040604
WO 2005000884 C1 20051006

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
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SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

US 2005271675 A1 20051208 US 2004-5851 20041206

PRAI WO 2004-US17736 A 20040604
US 2004-5851 A 20041206
US 2003-476598P P 20030605

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly-γ-glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:14426 CAPLUS

DN 142:112426

TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection

IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005000884	A1	20050106	WO 2004-US17736	20040604
WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

AU 2004252091	A1	20050106	AU 2004-252091	20040604
CA 2528067	AA	20050106	CA 2004-2528067	20040604
EP 1633778	A1	20060315	EP 2004-754360	20040604
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
US 2005271675	A1	20051208	US 2004-5851	20041206
WO 2005117965	A1	20051215	WO 2005-US19678	20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2006134143	A1	20060622	US 2005-559825	20051202
PRAI US 2003-476598P	P	20030605		
WO 2004-US17736	W	20040604		
US 2004-5851	A	20041206		

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ-D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ-D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
AN 2004:331575 CAPLUS
DN 140:338027
TI Methods for preparing Bacillus anthracis protective antigen for use in vaccines
IN Shiloach, Joseph; Leppla, Stephen H.; Ramirez, Delia M.; Schneerson, Rachel; Robbins, John B.
PA USA
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 2004076638	A1	20040422	US 2002-290712	20021108
PRAI	US 2001-344505P	P	20011109		

AB The authors disclose improved methods of producing and recovering B. anthracis protective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response.

L9 ANSWER 6 OF 9 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

DUPLICATE 3

AN 2004:149774 BIOSIS
DN PREV200400153906
TI Treatment of anthrax infection with combination of ciprofloxacin and antibodies to protective antigen of *Bacillus anthracis*.
AU Karginov, Vladimir A. [Reprint Author]; Robinson, Tanisha M.; Riemenschneider, Jenny; Golding, Basil; Kennedy, Michael; Shiloach, Joseph; Alibek, Ken
CS Advanced Biosystems, Inc., 10900 University Blvd., Manassas, VA, 20110, USA
vladimir.karginov@analex.com
SO FEMS Immunology and Medical Microbiology, (15 January 2004) Vol. 40, No. 1, pp. 71-74. print.
ISSN: 0928-8244 (ISSN print).
DT Article
LA English
ED Entered STN: 17 Mar 2004
Last Updated on STN: 17 Mar 2004
AB Currently there is no effective treatment for inhalational anthrax beyond administration of antibiotics shortly after exposure. There is need for new, safe and effective treatments to supplement traditional antibiotic therapy. Our study was based on the premise that simultaneous inhibition of lethal toxin action with antibodies and blocking of bacterial growth by antibiotics will be beneficial for the treatment of anthrax. In this study, we tested the effects of a combination treatment using purified rabbit or sheep anti-protective antigen (PA) antibodies and the antibiotic ciprofloxacin in a rodent anthrax model. In mice infected with a dose of *Bacillus anthracis* Sterne strain corresponding to 10 LD₅₀, antibiotic treatment with ciprofloxacin alone only cured 50% of infected animals. Administration of anti-PA IgG in combination with ciprofloxacin produced 90-100% survival. These data indicate that a combination of antibiotic/immunoglobulin therapy is more effective than antibiotic treatment alone in a rodent anthrax model.

L9 ANSWER 7 OF 9 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 4

AN 2003:478120 BIOSIS
DN PREV200300478120
TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of *Bacillus anthracis*: A potential addition to the anthrax vaccine.
AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
schneerr@mail.nih.gov
SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
ISSN: 0027-8424 (ISSN print).
DT Article
LA English
ED Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003
AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule(gammaDPGA) are essential for the virulence of *Bacillus anthracis*. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or corresponding synthetic peptides were bound to BSA, recombinant B.

anthracis PA (rPA), or recombinant *Pseudomonas aeruginosa* exotoxin A (rEPA). To identify the optimal construct, conjugates of *B. anthracis* gammaDPGA, *Bacillus pumilus* gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of *B. anthracis* tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

L9 ANSWER 8 OF 9 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 DUPLICATE 5
 AN 2002:281740 BIOSIS
 DN PREV200200281740
 TI Production, recovery and immunogenicity of the protective antigen from a
 recombinant strain of *Bacillus anthracis*.
 AU Ramirez, D. M.; Leppla, S. H.; Schneerson, R.; Shiloach, J.
 [Reprint author]
 CS Biotechnology Unit, LCDB, NIDDK, National Institutes of Health (NIH),
 Bethesda, MD, 20892, USA
 SO Journal of Industrial Microbiology and Biotechnology, (April, 2002) Vol.
 28, No. 4, pp. 232-238. print.
 ISSN: 1367-5435.
 DT Article
 LA English
 ED Entered STN: 8 May 2002
 Last Updated on STN: 8 May 2002
 AB The protective antigen (PA) is one of the three components of the
 anthrax toxin. It is a secreted nontoxic protein with a molecular
 weight of 83 kDa and is the major component of the currently licensed
 human vaccine for anthrax. Due to limitations found in the
 existing vaccine formulation, it has been proposed that genetically
 modified PA may be more effective as a vaccine. The expression and the
 stability of two recombinant PA (rPA) variants, PA-SNKE-DELTAFF-E308D and
 PA-N657A, were studied. These proteins were expressed in the
 nonsporogenic avirulent strain BH445. Initial results indicated that
 PA-SNKE-DELTAFF-E308D, which lacks two proteolysis-sensitive sites, is
 more stable than PA-N657A. Process development was conducted to establish
 an efficient production and purification process for PA-SNKE-DELTAFF-
 E308D. pH, media composition, growth strategy and protease inhibitors
 composition were analyzed. The production process chosen was based on
 batch growth of *B. anthracis* using tryptone and yeast extract as
 the only source of carbon, pH control at 7.5, and antifoam 289. Optimal
 harvest time was 14-18 h after inoculation, and EDTA (5 mM) was added upon
 harvest for proteolysis control. Recovery of the rPA was performed by
 expanded-bed adsorption (EBA) on a hydrophobic interaction chromatography
 (HIC) resin, eliminating the need for centrifugation, microfiltration and
 diafiltration. The EBA step was followed by ion exchange and gel
 filtration. rPA yields before and after purification were 130 and 90 mg/l,
 respectively. The purified rPA, without further treatment, treated with
 small amounts of formalin or adsorbed on alum, induced, high levels of IgG
 anti-PA with neutralization activities.

L9 ANSWER 9 OF 9 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 DUPLICATE 6

AN 2002:429815 BIOSIS
DN PREV200200429815
TI Development of an improved vaccine for anthrax.
AU Leppla, Stephen H. [Reprint author]; Robbins, John B.; Schneerson, Rachel;
Shiloach, Joseph
CS Oral Infection and Immunity Branch, NIDCR, 30 Convent Drive, Building 30,
Room 303, Bethesda, MD, 20892-4350, USA
Leppla@nih.gov
SO Journal of Clinical Investigation, (July, 2002) Vol. 110, No. 2, pp.
141-144. print.
CODEN: JCINAO. ISSN: 0021-9738.
DT Article
LA English
ED Entered STN: 14 Aug 2002
Last Updated on STN: 14 Aug 2002

=> e kubler kielb joanna/au

E1	1	KUBLER KERSTIN ALM/AU
E2	39	KUBLER KIELB J/AU
E3	37 -->	KUBLER KIELB JOANNA/AU
E4	2	KUBLER KIRSTEN/AU
E5	1	KUBLER KRAUER/AU
E6	1	KUBLER KRISZTINA/AU
E7	223	KUBLER L/AU
E8	1	KUBLER L F/AU
E9	1	KUBLER LUC/AU
E10	2	KUBLER LUCIEN/AU
E11	44	KUBLER M/AU
E12	2	KUBLER M C K/AU

=> s e2-e3 and anthra?

L10 17 ("KUBLER KIELB J"/AU OR "KUBLER KIELB JOANNA"/AU) AND ANTHRA?

=> dup rem l10

PROCESSING COMPLETED FOR L10

L11 6 DUP REM L10 (11 DUPLICATES REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 6 ANSWERS - CONTINUE? Y/(N):y

L11 ANSWER 1 OF 6 USPATFULL on STN

AN 2006:158613 USPATFULL

TI Poly-gamma-glutamic conjugates for eliciting immune responses directed
against bacilli

IN Schneerson, Rachel, Bethesda, MD, UNITED STATES
Leppla, Stephen, Bethesda, MD, UNITED STATES
Robbins, John B., Chevy Chase, MD, UNITED STATES
Shiloach, Joseph, Rockville, MD, UNITED STATES
Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
Liu, Darrell, Bethesda, MD, UNITED STATES
Majadly, Fathy, Frederick, MD, UNITED STATES

PI US 2006134143 A1 20060622

AI US 2004-559825 A1 20040604 (10)

WO 2004-US17736 20040604

20051202 PCT 371 date

PRAI US 2003-476598P 20030605 (60)

DT Utility

FS APPLICATION

LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
OR, 97204-2988, US

CLMN Number of Claims: 36

ECL Exemplary Claim: 1

DRWN 2 Drawing Page(s)

LN.CNT 2866

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Immunogenic compositions and methods for eliciting an immune response against *B. anthracis* and other bacilli are provided that include immunogenic conjugates of a poly- γ -glutamic acid (γ PGA) polypeptide of *B. anthracis*, or of another *Bacillus* that expresses a γ PGA polypeptide. The γ PGA conjugates elicit an effective immune response against *B. anthracis*, or against another *Bacillus*, in mammalian hosts to which the conjugates are administered.

L11 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 1

AN 2006:436213 BIOSIS

DN PREV200600430224

TI Additional conjugation methods and immunogenicity of *Bacillus anthracis* poly-gamma-D-glutarnic acid-protein conjugates.

AU Kubler-Kielb, Joanna [Reprint Author]; Liu, Teh-Yung; Mocca, Christopher; Majadly, Fathy; Robbins, John B.; Schneerson, Rachel

CS NICHD, NIH, LDMI, 9000 Rockville Pike, Bldg 6, Rm 1A05, Bethesda, MD 20892 USA

kielbj@mail.nih.gov

SO Infection and Immunity, (AUG 2006) Vol. 74, No. 8, pp. 4744-4749.

CODEN: INFIBR. ISSN: 0019-9567.

DT Article

LA English

ED Entered STN: 30 Aug 2006

Last Updated on STN: 30 Aug 2006

AB The capsule of *Bacillus anthracis*, composed of poly-gamma-D-glutamic acid (gamma DPGA), is an essential virulence factor of *B. anthracis*. The capsule inhibits innate host defense through its antiphagocytic action. gamma DPGA is a poor immunogen, but when covalently bound to a carrier protein, it elicits serum antibodies. To identify the optimal construct for clinical use, synthetic gamma DPGAs of different lengths were bound to carrier proteins at different densities. The advantages of the synthetic over the natural polypeptide are the homogeneous chain length and end groups, allowing conjugates to be accurately characterized and standardized and their chemical compositions to be related to their immunogenicities. In the present study, we evaluated, in addition to methods reported by us, hydrazone, oxime, and thioether linkages between gamma DPGA and several proteins, including bovine serum albumin, recombinant *Pseudomonas aeruginosa* exotoxin A, recombinant *B. anthracis* protective antigen (rPA), and tetanus toxoid (TT). The effects of the dosage and formulation on the immunogenicities of the conjugates were evaluated in mice. All conjugates were immunogenic. The optimal gamma DPGA chain length of 10 to 15 amino acids and the density, an average of 15 mol gamma DPGA per mol of protein, were confirmed. The thioether bond was the optimal linkage type, and TT and rPA were the best carriers. The optimal dosage was 1.2 to 2.5 μ g of gamma DPGA per mouse, and adsorption of the conjugates onto aluminum hydroxide significantly increased the antibody response to the protein with a lesser effect on anti-gamma DPGA levels.

L11 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

AN 2005:1294042 CAPLUS

DN 144:35295

TI Hydrazone conjugates of haptens and antigens

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy;

Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph

PA United States Dept. of Health and Human Services, USA

SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.

CODEN: USXXCO

DT Patent

LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
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	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
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	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRAI	WO 2004-US17736	A2	20040604		
	US 2003-476598P	P	20030605		
	US 2004-5851	A	20041206		

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L11 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STM

AN 2005:1314018 CAPLUS

DN 144:35300

TI Methods for preparing immunogenic conjugates for use in vaccines

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy;

Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph

PA The Government of the United States of America as Represented by the Secretary, Department of Health and Human Services, USA

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
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SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
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RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

WO 2005000884 A1 20050106 WO 2004-US17736 20040604

WO 2005000884 C1 20051006

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

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EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

US 2005271675 A1 20051208 US 2004-5851 20041206

PRAI WO 2004-US17736 A 20040604

US 2004-5851 A 20041206

US 2003-476598P P 20030605

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly- γ -glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:14426 CAPLUS

DN 142:112426

TI Bacillus capsular poly- γ -glutamic acid conjugates for eliciting immune responses against Bacillus infection

IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005000884	A1	20050106	WO 2004-US17736	20040604
WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

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 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2004252091 A1 20050106 AU 2004-252091 20040604
 CA 2528067 AA 20050106 CA 2004-2528067 20040604
 EP 1633778 A1 20060315 EP 2004-754360 20040604

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2005271675 A1 20051208 US 2004-5851 20041206
 WO 2005117965 A1 20051215 WO 2005-US19678 20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2006134143 A1 20060622 US 2005-559825 20051202

PRAI US 2003-476598P P 20030605

WO 2004-US17736 W 20040604

US 2004-5851 A 20041206

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly- γ -glutamic acid (γ PGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γ PGA polypeptide. The γ PGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ -D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBeAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ -D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 3

AN 2003:478120 BIOSIS

DN PREV200300478120

TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of Bacillus anthracis: A potential addition to the anthrax vaccine.

AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.

CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
 schneerr@mail.nih.gov

SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
ISSN: 0027-8424 (ISSN print).

DT Article

LA English

ED Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003

AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule(gammaDPGA) are essential for the virulence of Bacillus anthracis. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or corresponding synthetic peptides were bound to BSA, recombinant B. anthracis PA (rPA), or recombinant Pseudomonas aeruginosa exotoxin A (rEPA). To identify the optimal construct, conjugates of B. anthracis gammaDPGA, Bacillus pumilus gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of B. anthracis tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

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E1	2	LIU DARONG/AU
E2	1	LIU DARREL T/AU
E3	2 -->	LIU DARRELL/AU
E4	8	LIU DARRELL T/AU
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E9	42	LIU DASHAN/AU
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=> dup rem l12

PROCESSING COMPLETED FOR L12

L13 4 DUP REM L12 (1 DUPLICATE REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 4 ANSWERS - CONTINUE? Y/(N):y

L13 ANSWER 1 OF 4 USPATFULL on STN

AN 2006:158613 USPATFULL

TI Poly-gamma-glutamic conjugates for eliciting immune responses directed
 against bacilli
 IN Schneerson, Rachel, Bethesda, MD, UNITED STATES
 Leppla, Stephen, Bethesda, MD, UNITED STATES
 Robbins, John B., Chevy Chase, MD, UNITED STATES
 Shiloach, Joseph, Rockville, MD, UNITED STATES
 Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
 Liu, Darrell, Bethesda, MD, UNITED STATES
 Majadly, Fathy, Frederick, MD, UNITED STATES
 PI US 2006134143 A1 20060622
 AI US 2004-559825 A1 20040604 (10)
 WO 2004-US17736 20040604
 20051202 PCT 371 date
 PRAI US 2003-476598P 20030605 (60)
 DT Utility
 FS APPLICATION
 LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
 OR, 97204-2988, US
 CLMN Number of Claims: 36
 ECL Exemplary Claim: 1
 DRWN 2 Drawing Page(s)
 LN.CNT 2866

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Immunogenic compositions and methods for eliciting an immune response
 against B. anthracis and other bacilli are provided that
 include immunogenic conjugates of a poly- γ -glutamic acid
 (γ PGA) polypeptide of B. anthracis, or of another
 Bacillus that expresses a γ PGA polypeptide. The γ PGA
 conjugates elicit an effective immune response against B.
 anthracis, or against another Bacillus, in mammalian hosts to
 which the conjugates are administered.

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
 AN 2005:1294042 CAPLUS
 DN 144:35295
 TI Hydrazone conjugates of haptens and antigens
 IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen
 H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph
 PA United States Dept. of Health and Human Services, USA
 SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
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 MR, NE, SN, TD, TG

PRAI WO 2004-US17736 A2 20040604
 US 2003-476598P P 20030605
 US 2004-5851 A 20041206

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1314018 CAPLUS

DN 144:35300

TI Methods for preparing immunogenic conjugates for use in vaccines

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph

PA The Government of the United States of America as Represented by the Secretary, Department of Health and Human Services, USA

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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SN, TD, TG

US 2005271675	A1	20051208	US 2004-5851	20041206
PRAI WO 2004-US17736	A	20040604		
US 2004-5851	A	20041206		
US 2003-476598P	P	20030605		

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly-γ-glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:14426 CAPLUS

DN 142:112426

TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection

IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
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	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004252091	A1	20050106	AU 2004-252091	20040604
	CA 2528067	AA	20050106	CA 2004-2528067	20040604
	EP 1633778	A1	20060315	EP 2004-754360	20040604
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	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
	W:				
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SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
 ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

US 2006134143 A1 20060622 US 2005-559825 20051202
 PRAI US 2003-476598P P 20030605
 WO 2004-US17736 W 20040604
 US 2004-5851 A 20041206
 AB Immunogenic compns. and methods for eliciting an immune response against
 B. anthracis and other bacilli are provided that include
 immunogenic conjugates of a poly- γ -glutamic acid (γ PGA)
 polypeptides of B. anthracis, or of another Bacillus that
 expresses a γ PGA polypeptide. The γ PGA conjugates elicit an
 effective immune response against B. anthracis, or against
 another Bacillus, in mammalian hosts to which the conjugates are
 administered. The conjugate consists of γ -D-PGA and carrier
 selected from bovine serum albumin, recombinant Bacillus protective
 antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid,
 diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid,
 HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin,
 edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or
 combination of two or more. The preferred conjugate consists of
 γ -D-PGA and Bacillus protective antigen.
 RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> e majadly fathy/au

E1 17 MAJADLY F/AU
 E2 10 MAJADLY F D/AU
 E3 16 --> MAJADLY FATHY/AU
 E4 2 MAJADLY FATHY D/AU
 E5 55 MAJADO M/AU
 E6 3 MAJADO M A/AU
 E7 79 MAJADO M J/AU
 E8 3 MAJADO M JULIANA/AU
 E9 1 MAJADO MARIA E/AU
 E10 3 MAJADO MARIA J/AU
 E11 3 MAJADO MARIA JULIANA/AU
 E12 1 MAJADO MARTINEZ J/AU

=> s e1-e4 and anthra?

L14 17 ("MAJADLY F"/AU OR "MAJADLY F D"/AU OR "MAJADLY FATHY"/AU OR
 "MAJADLY FATHY D"/AU) AND ANTHRA?

=> dup rem l14

PROCESSING COMPLETED FOR L14

L15 6 DUP REM L14 (11 DUPLICATES REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 6 ANSWERS - CONTINUE? Y/(N):y

L15 ANSWER 1 OF 6 USPATFULL on STN

AN 2006:158613 USPATFULL

TI Poly-gamma-glutamic conjugates for eliciting immune responses directed
 against bacilli

IN Schneerson, Rachel, Bethesda, MD, UNITED STATES
 Leppla, Stephen, Bethesda, MD, UNITED STATES
 Robbins, John B., Chevy Chase, MD, UNITED STATES
 Shiloach, Joseph, Rockville, MD, UNITED STATES
 Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES

Liu, Darrell, Bethesda, MD, UNITED STATES

Majadly, Fathy, Frederick, MD, UNITED STATES

PI US 2006134143 A1 20060622

AI US 2004-559825 A1 20040604 (10)

WO 2004-US17736 20040604

20051202 PCT 371 date

PRAI US 2003-476598P 20030605 (60)

DT Utility

FS APPLICATION

LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND, OR, 97204-2988, US

CLMN Number of Claims: 36

ECL Exemplary Claim: 1

DRWN 2 Drawing Page(s)

LN.CNT 2866

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Immunogenic compositions and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly- γ -glutamic acid (γ PGA) polypeptide of B. anthracis, or of another Bacillus that expresses a γ PGA polypeptide. The γ PGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered.

L15 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 1

AN 2006:436213 BIOSIS

DN PREV200600430224

TI Additional conjugation methods and immunogenicity of Bacillus anthracis poly-gamma-D-glutarnic acid-protein conjugates.

AU Kubler-Kielb, Joanna [Reprint Author]; Liu, Teh-Yung; Mocca, Christopher; Majadly, Fathy; Robbins, John B.; Schneerson, Rachel

CS NICHD, NIH, LDMI, 9000 Rockville Pike, Bldg 6, Rm 1A05, Bethesda, MD 20892 USA

kielbj@mail.nih.gov

SO Infection and Immunity, (AUG 2006) Vol. 74, No. 8, pp. 4744-4749.

CODEN: INFIBR. ISSN: 0019-9567.

DT Article

LA English

ED Entered STN: 30 Aug 2006

Last Updated on STN: 30 Aug 2006

AB The capsule of Bacillus anthracis, composed of poly-gamma-D-glutamic acid (gamma DPGA), is an essential virulence factor of B. anthracis. The capsule inhibits innate host defense through its antiphagocytic action. gamma DPGA is a poor immunogen, but when covalently bound to a carrier protein, it elicits serum antibodies. To identify the optimal construct for clinical use, synthetic gamma DPGAs of different lengths were bound to carrier proteins at different densities. The advantages of the synthetic over the natural polypeptide are the homogeneous chain length and end groups, allowing conjugates to be accurately characterized and standardized and their chemical compositions to be related to their immunogenicities. In the present study, we evaluated, in addition to methods reported by us, hydrazone, oxime, and thioether linkages between gamma DPGA and several proteins, including bovine serum albumin, recombinant Pseudomonas aeruginosa exotoxin A, recombinant B. anthracis protective antigen (rPA), and tetanus toxoid (TT). The effects of the dosage and formulation on the immunogenicities of the conjugates were evaluated in mice. All conjugates were immunogenic. The optimal gamma DPGA chain length of 10 to 15 amino acids and the density, an average of 15 mol gamma DPGA per mol of protein, were confirmed. The thioether bond was the optimal linkage type, and TT and rPA were the best carriers. The optimal dosage was 1.2 to 2.5 μ g of gamma DPGA per mouse, and adsorption of the conjugates onto aluminum

hydroxide significantly increased the antibody response to the protein with a lesser effect on anti-gamma DPGA levels.

L15 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
AN 2005:1294042 CAPLUS
DN 144:35295
TI Hydrazone conjugates of haptens and antigens
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy;
Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph
PA United States Dept. of Health and Human Services, USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRAI	WO 2004-US17736	A2	20040604		
	US 2003-476598P	P	20030605		
	US 2004-5851	A	20041206		

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L15 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1314018 CAPLUS
DN 144:35300
TI Methods for preparing immunogenic conjugates for use in vaccines
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy;

PA Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph
 The Government of the United States of America as Represented by the
 Secretary, Department of Healthand Human Services, USA
 SO PCT Int. Appl., 53 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2005271675	A1	20051208	US 2004-5851	20041206
PRAI	WO 2004-US17736	A	20040604		
	US 2004-5851	A	20041206		
	US 2003-476598P	P	20030605		

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an
 antigen covalently linked to a carrier are discussed. The methods include
 reacting a first agent with a dihydrazide resulting in a
 hydrazino-modified first agent, wherein the first agent is a hapten, an
 antigen or a carrier; reacting a second agent with a benzaldehyde compound
 resulting in a benzaldehyde-modified second agent, wherein the second
 agent is a hapten, an antigen or a carrier, provided that the first agent
 or the second agent is a carrier; and reacting the hydrazine-modified
 first agent with the benzaldehyde-modified second agent resulting in an
 immunogenic conjugate comprising a hapten or an antigen covalently linked
 to a carrier via a hydrazone linkage. The examples discuss the
 conjugation of Bacillus poly-γ-glutamic acids to carriers such as
 bovine serum albumin, Bacillus anthracis protective antigen, and
 Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce
 IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:14426 CAPLUS

DN 142:112426

TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting
 immune responses against Bacillus infection

IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph;
 Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
 PA United States Dept. of Health and Human Services, USA
 SO PCT Int. Appl., 67 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
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	AU 2004252091	A1	20050106	AU 2004-252091	20040604
	CA 2528067	AA	20050106	CA 2004-2528067	20040604
	EP 1633778	A1	20060315	EP 2004-754360	20040604
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
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	US 2006134143	A1	20060622	US 2005-559825	20051202
PRAI	US 2003-476598P	P	20030605		
	WO 2004-US17736	W	20040604		
	US 2004-5851	A	20041206		

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly- γ -glutamic acid (γ PGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γ PGA polypeptide. The γ PGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ -D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBCAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ -D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 6 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 DUPLICATE 3
 AN 2003:478120 BIOSIS
 DN PREV200300478120
 TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in
 mice to the capsule of Bacillus anthracis: A potential addition
 to the anthrax vaccine.
 AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung;
 Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter;
 Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
 CS National Institute of Child Health and Human Development, National
 Institutes of Health, Bethesda, MD, 20892, USA
 schneerr@mail.nih.gov
 SO Proceedings of the National Academy of Sciences of the United States of
 America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
 ISSN: 0027-8424 (ISSN print).
 DT Article
 LA English
 ED Entered STN: 15 Oct 2003
 Last Updated on STN: 15 Oct 2003
 AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid)
 capsule(gammaDPGA) are essential for the virulence of Bacillus
 anthracis. A critical level of vaccine-induced IgG anti-PA
 confers immunity to anthrax, but there is no information about
 the protective action of IgG anti-gammaDPGA. Because the number of spores
 presented by bioterrorists might be greater than encountered in nature, we
 sought to induce capsular antibodies to expand the immunity conferred by
 available anthrax vaccines. The nonimmunogenic gammaDPGA or
 corresponding synthetic peptides were bound to BSA, recombinant B.
 anthracis PA (rPA), or recombinant Pseudomonas aeruginosa exotoxin
 A (rEPA). To identify the optimal construct, conjugates of B.
 anthracis gammaDPGA, Bacillus pumilus gammaDLPGA, and peptides of
 varying lengths (5-, 10-, or 20-mers), of the D or L configuration with
 active groups at the N or C termini, were bound at 5-32 mol per protein.
 The conjugates were characterized by physico-chemical and immunological
 assays, including GLC-MS and matrix-assisted laser desorption ionization
 time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice.
 IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest
 levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at
 10-20 mol per protein bound to the N- or C-terminal end. High IgG
 anti-gammaDPGA levels were elicited by two injections of 2.5 mug of
 gammaDPGA per mouse, whereas three injections were needed to achieve high
 levels of protein antibodies. rPA was the most effective carrier.
 Anti-gammaDPGA induced opsonophagocytic killing of B. anthracis
 tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by
 PA alone. gammaDPGA-rPA conjugates induced both anti-PA and
 anti-gammaDPGA.

=> s conjugate? and ?PGA

'?PGA' NOT LONG ENOUGH FOR LEFT TRUNCATION

You have entered a truncated stem whose length is less than
 the minimum allowed for left truncation in the requested
 search field. You may increase the length of the stem to
 the minimum allowed and try again. Enter HELP SFIELDS to
 to find the minimum stem length for left truncation in
 the requested search field.

=> s conjugate? and (poly glutamic acid?) and (anthrax or anthracis)

L16 22 CONJUGATE? AND (POLY GLUTAMIC ACID?) AND (ANTHRAX OR ANTHRACIS)

=> dup rem l16

PROCESSING COMPLETED FOR L16

L17 22 DUP REM L16 (0 DUPLICATES REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 22 ANSWERS - CONTINUE? Y/(N):y

L17 ANSWER 1 OF 22 USPATFULL on STN

AN 2006:166354 USPATFULL

TI Drug pre-targeting by means of bi-specific antibodies and hapten constructs comprising a carrier peptide and the active agent(s)

IN Goldenberg, David M, Mendham, NJ, UNITED STATES

Hansen, Hans J, Picayune, NJ, UNITED STATES

Leung, Shui-on, Hong Kong, CHINA

McBride, William J, Boonton, NJ, UNITED STATES

Gu, Zhengxing, Warren, NJ, UNITED STATES

PA Immunomedics, Inc., Morris Plains, NJ, UNITED STATES (U.S. corporation)

PI US 2006140858 A1 20060629

AI US 2003-514632 A1 20030516 (10)

WO 2003-GB2110 20030516

20050912 PCT 371 date

PRAI US 2002-10150654 20020517

DT Utility

FS APPLICATION

LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 1717 RHODE ISLAND AVE, NW,
WASHINGTON, DC, 20036-3001, US

CLMN Number of Claims: 127

ECL Exemplary Claim: 1

DRWN 7 Drawing Page(s)

LN.CNT 4528

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to targetable constructs which may be bound by a bi-specific antibody or antibody fragment having at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds the targetable construct. The targetable construct comprises a carrier portion which comprises or bears at least one epitope recognizable by at least one arm of said bi-specific antibody or antibody fragment. The targetable construct further comprises one or more therapeutic or diagnostic agents or enzymes. The invention provides constructs and methods for producing the targetable constructs and bi-specific antibodies or antibody fragments, as well as methods for using them.

L17 ANSWER 2 OF 22 USPATFULL on STN

AN 2006:40112 USPATFULL

TI Production and use of novel peptide-based agents with bispecific antibodies

IN Goldenberg, David M., Mendham, NJ, UNITED STATES

Hansen, Hans J., Picayune, MS, UNITED STATES

Leung, Shui-on, Madison, NJ, UNITED STATES

McBride, William J., Boonton, NJ, UNITED STATES

Qu, Zhengxing, Warren, NJ, UNITED STATES

PA Immunomedics, Inc., Morris Plains, NJ, UNITED STATES (U.S. corporation)

PI US 2006034759 A1 20060216

AI US 2005-198846 A1 20050808 (11)

RLI Division of Ser. No. US 2002-150654, filed on 17 May 2002, PENDING
Continuation-in-part of Ser. No. US 1999-382186, filed on 23 Aug 1999,
PENDING Continuation-in-part of Ser. No. US 2001-823746, filed on 3 Apr
2001, GRANTED, Pat. No. US 6962702 Continuation-in-part of Ser. No. US
1999-337756, filed on 22 Jun 1999, PENDING Continuation-in-part of Ser.
No. US 1999-337756, filed on 22 Jun 1999, PENDING

PRAI US 1998-104156P 19981014 (60)

US 1998-90142P 19980622 (60)

DT Utility

FS APPLICATION

LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 1717 RHODE ISLAND AVE, NW,
WASHINGTON, DC, 20036-3001, US

CLMN Number of Claims: 95
ECL Exemplary Claim: 1-33
DRWN 7 Drawing Page(s)
LN.CNT 4591

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a bi-specific antibody or antibody fragment having at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable construct. The targetable construct comprises a carrier portion which comprises or bears at least one epitope recognizable by at least one arm of said bi-specific antibody or antibody fragment. The targetable construct further comprises one or more therapeutic or diagnostic agents or enzymes. The invention provides constructs and methods for producing the bi-specific antibodies or antibody fragments, as well as methods for using them.

L17 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:452992 CAPLUS

TI An intranasal vaccine targeting both the Bacillus anthracis toxin and bacterium provides protection against aerosol spore challenge in rabbits

AU Wimer-Mackin, S.; Hinchcliffe, M.; Petrie, C. R.; Warwood, S. J.; Tino, W. T.; Williams, M. S.; Stenz, J. P.; Cheff, A.; Richardson, C.

CS LigoCyte Pharmaceuticals Inc., Bozeman, MT, 59718, USA

SO Vaccine (2006), 24(18), 3953-3963

CODEN: VACCDE; ISSN: 0264-410X

PB Elsevier B.V.

DT Journal

LA English

AB An intranasal vaccine targeting the Bacillus anthracis toxin and vegetative bacterium was tested for the ability to protect immunized rabbits against aerosol B. anthracis spore exposure. Rabbits were vaccinated intranasally with PA-based vaccines formulated as dry powders with or without chitosan (ChiSys®, Archimedes Development Limited), a compound that exhibits muco-adhesive properties, or as a liquid Formulations also contained MPL adjuvant and PA. Some vaccines contained PA conjugated to a 10-mer peptide of the poly--glutamic acid capsule of B. anthracis. Rabbits were immunized on days 0 and 28 and aerosol challenged with an average 250 LD50 Ames spores on day 85. Serum antibody was measured before and after challenge. Significant anti-PA serum IgG levels were obtained, particularly with use of ChiSys® based formulations. PA-Conj induced significant anti-capsule responses, although a formulation containing free capsule peptide did not. All immunized rabbits survived the challenge, but differences in morbidity, as evidenced by anorexia, between vaccine groups were observed. Only rabbits immunized with PA + PA-Conj appeared normal throughout the post-challenge observation period (14 days), while all that received PA with the free capsule peptide appeared ill at times as evidenced by a failure to eat normally. One neg. control rabbit received a lower inhaled spore dose (183 LD50) and survived the challenge, although it was anorexic post-challenge. It also had a high level of anti-LF antibodies in its convalescent serum (5400 U/mL), indicating an extensive infection. In contrast, 75% of the immunized rabbits had no LF-specific antibody in their post-challenge sera, and the rest had low levels (≤ 138 U/mL), indicating that infections resulting in toxin production were avoided or greatly reduced. Thus, intranasal immunization with a chitosan-based powder vaccine combining PA and capsule epitopes provided superior protection against B. anthracis infection compared to a single antigen (PA) vaccine, as evidenced by a reduction in morbidity and prevention of death.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:76327 CAPLUS
 DN 142:175358
 TI Anthrax conjugate vaccine induces antibodies to both
 bacilli and anthrax toxins
 IN Wang, Julia Y.; Mekalanos, John; Rhie, Gi-Eun; Collier, John R.
 PA President and Fellows of Harvard College, USA; The Brigham and Women's
 Hospital, Inc.
 SO PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005007804	A2	20050127	WO 2004-US10933	20040409
	WO 2005007804	A3	20050909		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,				
	CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,				
	GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,				
	LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,				
	NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,				
	TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,				
	BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,				
	ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,				
	SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,				
	TD, TG				

PRAI US 2003-461406P P 20030410

AB The present invention is directed to immunogenic conjugates
 comprised of poly- γ -D-glutamic acid (PGA) covalently bound to
 protective antigen (PA). The invention includes methods for making
 conjugates, vaccines in which they are present, and methods for
 immunizing individuals in which they are used. Conjugation produces a
 synergistic effect dramatically increasing the response of animals to both
 the PGA and PA components of the conjugate. Antibodies to PGA
 and PA confer protection against both bacilli and anthrax
 toxins. The PGA for the vaccine is purified from *B. licheniformis* and the
 recombinant PA was expressed in *E. coli* and purified before the synthesis
 of the vaccine conjugate. Also prepared was a PGA-hepatitis B
 core protein conjugate.

L17 ANSWER 5 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:14426 CAPLUS
 DN 142:112426
 TI Bacillus capsular poly- γ -glutamic acid conjugates for
 eliciting immune responses against Bacillus infection
 IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph;
 Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
 PA United States Dept. of Health and Human Services, USA
 SO PCT Int. Appl., 67 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,				
	CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,				
	GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,				
	LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,				
	NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,				
	TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

AU 2004252091 A1 20050106 AU 2004-252091 20040604
CA 2528067 AA 20050106 CA 2004-2528067 20040604
EP 1633778 A1 20060315 EP 2004-754360 20040604
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
US 2005271675 A1 20051208 US 2004-5851 20041206
WO 2005117965 A1 20051215 WO 2005-US19678 20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

US 2006134143 A1 20060622 US 2005-559825 20051202
PRAI US 2003-476598P P 20030605
WO 2004-US17736 W 20040604
US 2004-5851 A 20041206

AB Immunogenic compns. and methods for eliciting an immune response against
B. anthracis and other bacilli are provided that include
immunogenic conjugates of a poly- γ -glutamic acid
(γ PGA) polypeptides of B. anthracis, or of another
Bacillus that expresses a γ PGA polypeptide. The γ PGA
conjugates elicit an effective immune response against B.
anthracis, or against another Bacillus, in mammalian hosts to
which the conjugates are administered. The conjugate
consists of γ -D-PGA and carrier selected from bovine serum albumin,
recombinant Bacillus protective antigen, recombinant Pseudomonas
aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis
toxoid, Clostridium perfringens toxoid, HBsAg, HbCag, heyhole limpet
hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin,
mammalian Ig., analog or mimetic, or combination of two or more. The
preferred conjugate consists of γ -D-PGA and Bacillus
protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 6 OF 22 USPATFULL on STM

AN 2005:275142 USPATFULL

TI Compositions and methods for topical diagnostic and therapeutic
transport

IN Dake, Michael D., Stanford, CA, UNITED STATES

Waugh, Jacob M., Mountain View, CA, UNITED STATES

PA Essentia Biosystems, Inc, Mountain View, CA, UNITED STATES (U.S.
corporation)

PI US 2005239705 A1 20051027

AI US 2005-73307 A1 20050303 (11)

PRAI US 2004-550014P 20040303 (60)

DT Utility

FS APPLICATION

LREP MORGAN & FINNEGAN, L.L.P., 3 World Financial Center, New York, NY,
10381-2101, US

CLMN Number of Claims: 191

ECL Exemplary Claim: 1

DRWN 17 Drawing Page(s)

LN.CNT 3191

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions and methods are provided that are useful for the delivery, including transdermal delivery, of biologically active agents, such as non-protein non-nucleotide therapeutics and protein-based therapeutics excluding insulin, botulinum toxins, antibody fragments, and VEGF. The compositions and methods are particularly useful for topical delivery of antifungal agents and antigenic agents suitable for immunization. Alternately, the compositions can be prepared with components useful for targeting the delivery of the compositions as well as imaging components.

L17 ANSWER 7 OF 22 USPATFULL on STN

AN 2005:157794 USPATFULL

TI Fluorinated carbohydrate conjugates

IN McBride, William J., Boonton, NJ, UNITED STATES

Goldenberg, David M., Mendham, NJ, UNITED STATES

PA Immunomedics, Inc., Morris Plains, NJ, UNITED STATES (U.S. corporation)

PI US 2005136001 A1 20050623

AI US 2004-901441 A1 20040729 (10)

PRAI US 2003-490884P 20030729 (60)

DT Utility

FS APPLICATION

LREP Paul M. Booth, Ph.D., Heller Ehrman White & McAuliffe, 1717 Rhode Island Avenue, N.W., Washington, DC, 20036-3001, US

CLMN Number of Claims: 18

ECL Exemplary Claim: 1

DRWN 15 Drawing Page(s)

LN.CNT 2380

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are novel conjugates that include fluorinated carbohydrate molecules and methods for synthesizing the conjugates. The fluorinated carbohydrate molecule may include a radioisotope. The method of synthesizing the conjugate is useful for labeling selected molecules, and the conjugates may be useful in diagnostic or therapeutic methods. Particularly, the conjugates may be useful in diagnostic or therapeutic kits.

L17 ANSWER 8 OF 22 USPATFULL on STN

AN 2005:138029 USPATFULL

TI Modified polypeptides with therapeutic activity and methods of use

IN Mayo, Kevin H., Minneapolis, MN, UNITED STATES

PA Regents of the University of Minnesota, Minneapolis, MN, UNITED STATES (U.S. corporation)

PI US 2005118678 A1 20050602

AI US 2004-967060 A1 20041015 (10)

PRAI US 2003-512372P 20031017 (60)

DT Utility

FS APPLICATION

LREP MUETING, RAASCH & GEBHARDT, P.A., P.O. BOX 581415, MINNEAPOLIS, MN, 55458, US

CLMN Number of Claims: 44

ECL Exemplary Claim: 1

DRWN 16 Drawing Page(s)

LN.CNT 2102

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Polypeptides modified by fatty acid conjugation and methods of using such modified polypeptides in treating bacterial infections, including the treatment of antibiotic resistant bacterial infections, are disclosed.

L17 ANSWER 9 OF 22 USPATFULL on STN

AN 2005:117278 USPATFULL

TI Multivalent carriers of bi-specific antibodies
IN Hansen, Hans J., Picayune, MS, UNITED STATES
McBride, William J., Boonton, NJ, UNITED STATES
Qu, Zhengxing, Warren, NJ, UNITED STATES
PA Immunomedics, Inc., Morris Plains, NJ, UNITED STATES (U.S. corporation)
PI US 2005100543 A1 20050512
AI US 2004-882151 A1 20040701 (10)
PRAI US 2003-483832P 20030701 (60)
DT Utility
FS APPLICATION
LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 1717 RHODE ISLAND AVE, NW,
WASHINGTON, DC, 20036-3001, US
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 5871

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided herein are targetable constructs that are multivalent carriers of bi-specific antibodies, i.e., each molecule of a targetable construct can serve as a carrier of two or more bi-specific antibodies. Also provided are targetable complexes formed by the association of a targetable construct with two or more bi-specific antibodies. The targetable constructs and targetable complexes of the invention are incorporated into biosensors, kits and pharmaceutical compositions, and are used in a variety of therapeutic and other methods.

L17 ANSWER 10 OF 22 USPATFULL on STN

AN 2005:30279 USPATFULL

TI D-amino acid peptides

IN McBride, William J., Boonton, NJ, UNITED STATES
Goldenberg, David M., Mendham, NJ, UNITED STATES

PA Immunomedics, Inc., Morris Plains, NJ (U.S. corporation)

PI US 2005025709 A1 20050203

AI US 2004-866180 A1 20040614 (10)

PRAI US 2003-478403P 20030613 (60)

DT Utility

FS APPLICATION

LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 1666 K STREET,NW, SUITE 300,
WASHINGTON, DC, 20006

CLMN Number of Claims: 151

ECL Exemplary Claim: 1

DRWN 18 Drawing Page(s)

LN.CNT 4255

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides compounds of the formula
X--R.sup.1-D-[Dpr, Orn or Lys] (A)-R.sup.2(Z)-D-[Dpr, Orn or
Lys] (B)--R.sup.3(Y)--NR.sup.4R.sup.5; or R.sup.1(X)-D-[Dpr, Orn or
Lys] (A)-R.sup.2(Z)-D-[Dpr, Orn or Lys] (B)--R.sup.3(Y)--NR.sup.4R.sup.5,
in which X is a hard acid cation chelator, a soft acid cation chelator
or Ac--, R.sup.1, R.sup.2 and R.sup.3 are independently selected from a
covalent bond or one or more D-amino acids that can be the same or
different, Y is a hard acid cation chelator, a soft acid cation chelator
or absent, Z is a hard acid cation chelator, a soft acid cation chelator
or absent, and A and B are haptens or hard acid cation chelators and can
be the same or different, and R.sup.4 and R.sup.5 are independently
selected from the group consisting of hard acid cation chelators, soft
acid cation chelators, enzymes, therapeutic agents, diagnostic agents
and H. The present invention also provides methods of using these
compounds and kits containing the compounds.

L17 ANSWER 11 OF 22 USPATFULL on STN

AN 2005:3843 USPATFULL

TI Therapeutic and diagnostic conjugates for use with
multispecific antibodies

IN McBride, William J., Boonton, NJ, UNITED STATES
 Goldenberg, David M., Mendham, NJ, UNITED STATES
 Noren, Carl, Mt. Arlington, NJ, UNITED STATES
 Hansen, Hans J., Picayune, MS, UNITED STATES
 PA IMMUNOMEDICS, INC. (U.S. corporation)
 PI US 2005002945 A1 20050106
 AI US 2004-776470 A1 20040211 (10)
 RLI Continuation-in-part of Ser. No. US 2002-150654, filed on 17 May 2002,
 PENDING Continuation-in-part of Ser. No. US 1999-382186, filed on 23 Aug
 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-337756, filed
 on 22 Jun 1999, PENDING Continuation-in-part of Ser. No. US 2001-823746,
 filed on 3 Apr 2001, PENDING Continuation-in-part of Ser. No. US
 1999-337756, filed on 22 Jun 1999, PENDING
 PRAI US 1998-90142P 19980622 (60)
 US 1998-104156P 19981014 (60)
 US 1998-90142P 19980622 (60)
 US 1998-104156P 19981014 (60)
 DT Utility
 FS APPLICATION
 LREP FOLEY AND LARDNER, SUITE 500, 3000 K STREET NW, WASHINGTON, DC, 20007
 CLMN Number of Claims: 135
 ECL Exemplary Claim: 1
 DRWN 18 Drawing Page(s)
 LN.CNT 3522
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB Disclosed are compounds that include two or more haptens
 conjugated by a spacer or a carrier. The haptens may include
 diethylenetriaminepentaacetate (DTPA), histimine-succinyl-glutamine
 (HSG), or combinations of DTPA and HSG. The compound also includes an
 effector molecule which may be conjugated to one or more of
 the haptens, the spacer/carrier, or both. The effector molecule may be
 conjugated by a number of linkages including an ester linkage,
 an imino linkage, an amino linkage, a sulfide linkage, a
 thiosemicarbazone linkage, a semicarbazone linkage, an oxime linkage, an
 ether linkage, or combinations of these linkages. Also disclosed are
 methods of synthesizing the compounds and/or precursors of the
 compounds.
 L17 ANSWER 12 OF 22 USPATFULL on STN
 AN 2004:280799 USPATFULL
 TI Multi-component biological transport systems
 IN Waugh, Jacob, Mountain View, CA, UNITED STATES
 Dake, Michael, Stanford, CA, UNITED STATES
 PA Essentia Biosystems, Inc., Mountain View, CA (U.S. corporation)
 PI US 2004220100 A1 20041104
 AI US 2004-793138 A1 20040303 (10)
 RLI Continuation-in-part of Ser. No. US 2001-910432, filed on 20 Jul 2001,
 PENDING
 PRAI US 2000-220244P 20000721 (60)
 DT Utility
 FS APPLICATION
 LREP MORGAN & FINNEGAN, L.L.P., 3 WORLD FINANCIAL CENTER, NEW YORK, NY,
 10281-2101
 CLMN Number of Claims: 240
 ECL Exemplary Claim: 1
 DRWN 12 Drawing Page(s)
 LN.CNT 3742
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB Compositions and methods are provided that are useful for the delivery,
 including transdermal delivery, of biologically active agents, including
 nucleic acids and therapeutic proteins including insulin, larger
 therapeutic proteins such as botulinum toxin and other biologically
 active agents such as a therapeutic protein which does not
 therapeutically alter blood glucose levels, a therapeutic nucleic

acid-based agent, a non-protein non-nucleic acid therapeutic agent such as an antifungal agent or alternately an agent for immunization. The compositions can be prepared with components useful for targeting the delivery of the compositions as well as imaging components.

L17 ANSWER 13 OF 22 USPATFULL on STN

AN 2004:203967 USPATFULL

TI Pyrrolidones with anti-HIV activity

IN Wu, Baogen, San Diego, CA, UNITED STATES

He, Yun, San Diego, CA, UNITED STATES

Ngyuen, Truc, San Diego, CA, UNITED STATES

Kuhen, Kelli L., Carlsbad, CA, UNITED STATES

Ellis, David Archer, San Diego, CA, UNITED STATES

Jiang, Tao, San Diego, CA, UNITED STATES

Xe, Xiaohui, San Diego, CA, UNITED STATES

Yang, Kunyong, San Diego, CA, UNITED STATES

Bursulaya, Badry, San Diego, CA, UNITED STATES

PA IRM LLC, a Delaware LLC, Hamilton HM LX, BERMUDA (U.S. corporation)

PI US 2004157859 A1 20040812

AI US 2003-690873 A1 20031021 (10)

PRAI US 2002-422619P 20021030 (60)

US 2002-420480P 20021021 (60)

DT Utility

FS APPLICATION

LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

CLMN Number of Claims: 22

ECL Exemplary Claim: 1

DRWN 101 Drawing Page(s)

LN.CNT 3331

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to inhibition of viruses, e.g., HIV using pyrrolidones and compounds related to pyrrolidones. The invention further relates to methods for identifying and using agents, including small molecule chemical compositions that inhibit HIV in a cell; as well as to methods of prophylaxis, and therapy related to HIV infection and related disease states such as AIDS.

L17 ANSWER 14 OF 22 USPATFULL on STN

AN 2004:197449 USPATFULL

TI Oxindoles with anti-HIV activity

IN He, Yun, San Diego, CA, UNITED STATES

Jiang, Tao, San Diego, CA, UNITED STATES

Kuhen, Kelli L., Carlsbad, CA, UNITED STATES

Ellis, David Archer, San Diego, CA, UNITED STATES

Wu, Baogen, San Diego, CA, UNITED STATES

Wu, Tom Yao-Hsiang, La Jolla, CA, UNITED STATES

Bursulaya, Badry, San Diego, CA, UNITED STATES

PA IRM LLC, a Delaware LLC, Hamilton, BERMUDA (U.S. corporation)

PI US 2004152755 A1 20040805

AI US 2003-690802 A1 20031021 (10)

PRAI US 2002-420482P 20021021 (60)

US 2002-420481P 20021021 (60)

DT Utility

FS APPLICATION

LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

CLMN Number of Claims: 17

ECL Exemplary Claim: 1

DRWN 21 Drawing Page(s)

LN.CNT 2180

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to inhibition of viruses, e.g., HIV using oxindoles and compounds related to oxindoles. The invention further

relates to methods for identifying and using agents, including small molecule chemical compositions that inhibit HIV in a cell; as well as to methods of prophylaxis, and therapy related to HIV infection and related disease states such as AIDS.

L17 ANSWER 15 OF 22 USPATFULL on STN
AN 2004:197413 USPATFULL
TI Quinolones with anti-HIV activity
IN He, Yun, San Diego, CA, UNITED STATES
Ellis, David Archer, San Diego, CA, UNITED STATES
Anaclerio, Beth Marie, San Diego, CA, UNITED STATES
Kuhlen, Kelli L., Carlsbad, CA, UNITED STATES
Wu, Baogen, San Diego, CA, UNITED STATES
Jiang, Tao, San Diego, CA, UNITED STATES
PA IRM LLC, a Delaware LLC, Hamilton, HM LX, BERMUDA (U.S. corporation)
PI US 2004152719 A1 20040805
US 7019141 B2 20060328
AI US 2003-690738 A1 20031021 (10)
PRAI US 2002-420163P 20021021 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 14 Drawing Page(s)
LN.CNT 2027

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to inhibition of viruses, e.g., HIV using quinolones and compounds related to quinolones. The invention further relates to methods for identifying and using agents, including small molecule chemical compositions that inhibit HIV in a cell; as well as to methods of prophylaxis, and therapy related to HIV infection and related disease states such as AIDS.

L17 ANSWER 16 OF 22 USPATFULL on STN
AN 2004:76181 USPATFULL
TI Immunogenicity-enhancing carriers and compositions thereof and methods of using the same
IN Waggoner, David W., JR., Seattle, WA, UNITED STATES
Coon, Michael E., Seattle, WA, UNITED STATES
PI US 2004057958 A1 20040325
AI US 2003-441944 A1 20030519 (10)
PRAI US 2002-381550P 20020517 (60)
DT Utility
FS APPLICATION
LREP DONALD W. WYATT, CELL THERAPEUTICS, INC., 501 ELLIOTT AVENUE WEST, #400, SEATTLE, WA, 98119
CLMN Number of Claims: 85
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2556

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to compositions comprising a substantially non-antigenic carrier associated with an antigen and the use of such compositions to enhance the immunogenicity of the associated antigen. In addition, the compositions of the invention may be used to generate an immune response directed predominantly to an antigen associated with a carrier. Specific carriers of the invention include homopolymers and copolymers of polyamino acids. Compositions of the invention are used according to the invention to elicit or enhance an immune response directed against an antigen and may be used for the prevention and treatment of infection and disease, for example. Additionally, compositions of the invention are useful for generating an

antibodies specific for an antigen and, accordingly, may be used to generate antigen-specific antibodies suitable for the diagnosis or treatment of infection and disease.

L17 ANSWER 17 OF 22 USPATFULL on STN

AN 2004:70645 USPATFULL

TI Electroporation methods for introducing bioactive agents into cells

IN Barman, Shikha P., Bedford, MA, UNITED STATES

Hedley, Mary Lynne, Lexington, MA, UNITED STATES

Wang, Daqing, Bedford, MA, UNITED STATES

PI US 2004053873 A1 20040318

AI US 2003-370131 A1 20030219 (10)

PRAI US 2002-357542P 20020215 (60)

DT Utility

FS APPLICATION

LREP FISH & RICHARDSON PC, 225 FRANKLIN ST, BOSTON, MA, 02110

CLMN Number of Claims: 33

ECL Exemplary Claim: 1

DRWN 6 Drawing Page(s)

LN.CNT 1987

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides compositions and methods for introducing bioactive agents into cells. Bioactive agents are provided together with a delivery vehicle and a cell is subjected to electroporation, thereby resulting in the introduction of the bioactive agent into the cell.

L17 ANSWER 18 OF 22 USPATFULL on STN

AN 2004:57028 USPATFULL

TI Polymeric delivery systems

IN Griffiths, Gary L., Morristown, NJ, UNITED STATES

Goldenberg, David M., Medham, NJ, UNITED STATES

Hansen, Hans J., Picayune, MS, UNITED STATES

PA Immunomedics, Inc. (U.S. corporation)

PI US 2004043030 A1 20040304

AI US 2003-456580 A1 20030609 (10)

RLI Continuation-in-part of Ser. No. US 2002-209592, filed on 31 Jul 2002, PENDING

PRAI US 2001-308605P 20010731 (60)

DT Utility

FS APPLICATION

LREP Stephen B. Maebius, Foley & Lardner, Washington Harbour, 3000 K Street, N.W., Suite 500, Washington, DC, 20007-5143

CLMN Number of Claims: 73

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 2547

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method of targeting an agent towards a targeting site in a tissue comprising administering a multi-specific antibody or antibody fragment comprising a targeting arm and a capture arm that binds to a polymer conjugate, and administering a polymer conjugate to the tissue. The present invention also relates to a kit for targeting a target site within a comprising a multi-specific antibody or antibody fragment comprising a targeting arm and a capture arm that binds to a polymer conjugate, and a polymer conjugate.

L17 ANSWER 19 OF 22 USPATFULL on STN

AN 2003:282254 USPATFULL

TI Use of bi-specific antibodies for pre-targeting diagnosis and therapy

IN Goldenberg, David M., Mendham, NJ, UNITED STATES

Hansen, Hans J., Picayune, MS, UNITED STATES

Leung, Shui-On, Shatin, NT, HONG KONG

McBride, William J., Boonton, NJ, UNITED STATES

Qu, Zhengxing, Warren, NJ, UNITED STATES
PA IMMUNOMEDICS, INC. (U.S. corporation)
PI US 2003198595 A1 20031023
AI US 2002-150654 A1 20020517 (10)
RLI Continuation-in-part of Ser. No. US 1999-382186, filed on 23 Aug 1999,
PENDING Continuation-in-part of Ser. No. US 2001-823746, filed on 3 Apr
2001, PENDING
PRAI US 1998-104156P 19981014 (60)
US 1998-90142P 19980622 (60)
DT Utility
FS APPLICATION
LREP FOLEY AND LARDNER, SUITE 500, 3000 K STREET NW, WASHINGTON, DC, 20007
CLMN Number of Claims: 127
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 4670

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a bi-specific antibody or antibody
fragment having at least one arm that specifically binds a targeted
tissue and at least one other arm that specifically binds a targetable
construct. The targetable construct comprises a carrier portion which
comprises or bears at least one epitope recognizable by at least one arm
of said bi-specific antibody or antibody fragment. The targetable
construct further comprises one or more therapeutic or diagnostic agents
or enzymes. The invention provides constructs and methods for producing
the bi-specific antibodies or antibody fragments, as well as methods for
using them.

L17 ANSWER 20 OF 22 USPATFULL on STN

AN 2003:158943 USPATFULL
TI Therapeutic uses of polyvalent compositions in infectious diseases
IN Mekalanos, John J., Charlestown, MA, UNITED STATES
Wang, Ying, Brookline, MA, UNITED STATES
Collier, R. John, Wellesley Hills, CA, UNITED STATES
Mourez, Michael, Boston, MA, UNITED STATES

PI US 2003108556 A1 20030612
AI US 2002-165762 A1 20020607 (10)
PRAI US 2001-296942P 20010608 (60)
DT Utility
FS APPLICATION
LREP EDWARDS & ANGELL, LLP, P.O. BOX 9169, BOSTON, MA, 02209
CLMN Number of Claims: 48
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1705

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB New therapeutic methods and compositions are provided for treating
against an infectious agent in a mammal by administration of a polymeric
material having linked thereto a plurality of therapeutic agents against
the infective agent, wherein the polymer comprises polymerized dextran
or ethylene glycol units. The compositions and methods of the invention
are particularly useful to treat against bacterial infections, including
treatment of mammalian cells infected with gram-negative bacteria or
gram-positive bacteria. The compositions of the invention can be useful
for treating against anthrax, staphylococcus, pneumococcus and
other bacteria, parasites, fungi, viral and protozoan infections.

L17 ANSWER 21 OF 22 USPATFULL on STN

AN 2002:219333 USPATFULL
TI Use of high density microparticles for removal of pathogens
IN Cook, David N., Lafayette, CA, UNITED STATES
Monroy, Rodney L., Rockport, MA, UNITED STATES
PI US 2002117453 A1 20020829
US 6730230 B2 20040504

AI US 2002-43471 A1 20020111 (10)
PRAI US 2001-262443P 20010116 (60)
DT Utility
FS APPLICATION
LREP CARELLA, BAYRNE, BAIN, GILFILLAN,, CECCHI, STEWART & OLSTEIN, 6 Becker
Farm Road, Roseland, NJ, 07068
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 877

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods of using high-density microparticles to bind and remove
pathogens from biological fluids are disclosed. Pathogens include
prions, viruses, bacteria and protozoa.

L17 ANSWER 22 OF 22 USPATFULL on STN

AN 1999:50841 USPATFULL
TI Antigen-processing cell-targeted conjugates
IN Swadesh, Joel K., 285 Plantation St., No. 718, Worcester, MA, United
States 01604
Sevoian, Martin, 167 Montague Rd., North Amherst, MA, United States
01059

PI US 5898033 19990427

AI US 1997-994334 19971219 (8)

RLI Continuation of Ser. No. US 1995-475528, filed on 7 Jun 1995, now
abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: MacMillan, Keith D.

LREP Fish & Richardson P.C.

CLMN Number of Claims: 18

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 561

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An anti-inflammatory conjugate including a polyamino acid
backbone, a non-steroidal anti-inflammatory agent, and a moiety linking
the anti-inflammatory agent to the backbone, wherein the polyamino acid
backbone has a molecular weight greater than 250 kD.

=> s l17 and ((poly glutamic acid?) (2w) (anthrax or anthracis))

L18 0 L17 AND ((POLY GLUTAMIC ACID?) (2W) (ANTHRAX OR ANTHRACIS))

=> s l17 and ((poly glutamic acid?) (2w) (conjugate?))

L19 1 L17 AND ((POLY GLUTAMIC ACID?) (2W) (CONJUGATE?))

=> d

L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:14426 CAPLUS

DN 142:112426

TI Bacillus capsular poly- γ -glutamic acid conjugates for
eliciting immune responses against Bacillus infection

IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph;
Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
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	CA 2528067	AA	20050106	CA 2004-2528067	20040604
	EP 1633778	A1	20060315	EP 2004-754360	20040604
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	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
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	US 2006134143	A1	20060622	US 2005-559825	20051202
PRAI	US 2003-476598P	P	20030605		
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RE.CNT	9	THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			